

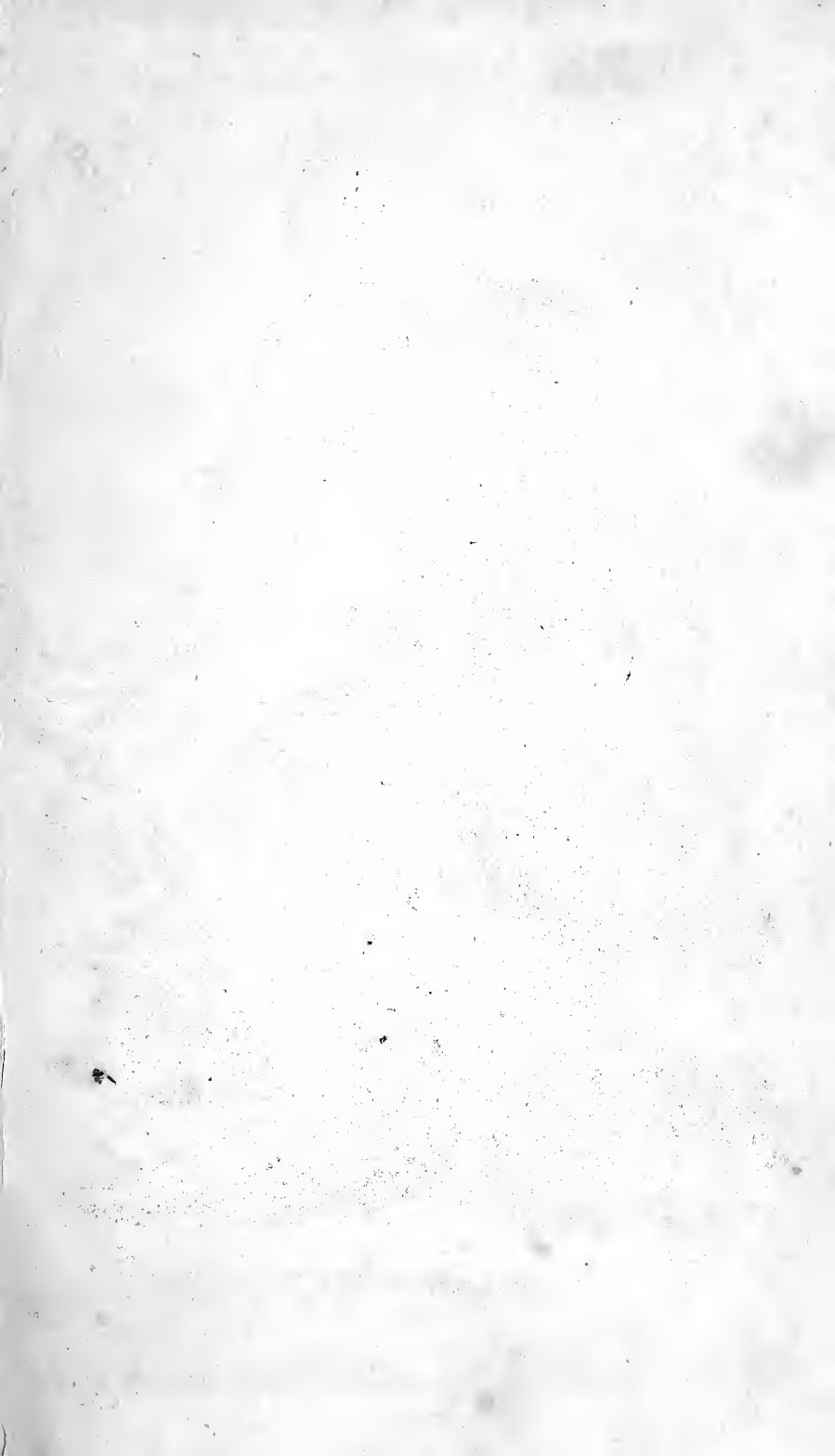






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THE  
**NATURAL HISTORY**

OF  
**QUADRUPEDS,**

AND  
**CETACEOUS ANIMALS,**

FROM THE WORKS

OF THE  
BEST AUTHORS, ANTIENT AND MODERN,

EMBELLISHED WITH

NUMEROUS PLATES,  
ACCURATELY COLOURED FROM NATURE.

~~~~~  
IN TWO VOLUMES.  
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**VOL. I.**

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## INTRODUCTION.

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**N**ATURAL HISTORY is a science both useful and entertaining : as it comprehends animals, vegetables, and fossils ; air, earth, and sea, with all their inhabitants and productions ; it may be said to include the knowledge of all nature, and to present an inexhaustible fund of inquiry and of amusement. It is intimately connected with all the other sciences ; and with all the arts, from the simplest and rudest, to the most complicated and the most elegant.

From an acquaintance with the economy of nature, many advantages have already accrued to man ; and from a more intimate knowledge of them, many more may still be derived. The comfort of all ranks may be said to depend on the knowledge of natural history. The husbandman needs to know the characters of the tame animals which he employs ; what advantages are to be derived from them ; whether there are others that

would suit his purpose better ; where they are to be found ; how they may be procured, and how supported ; the qualities of the soil which he cultivates, and the means of managing and of improving it ; the nature of the grain which he raises ; and whether he might not, with advantage, substitute a different species, instead of that which hath been in common use. Even the meanest mechanic must have a pretty accurate knowledge of many of the qualities of those natural objects with which his art is connected. The fine arts, though usually considered as the peculiar province of imagination, depend greatly upon natural history. Both in music and painting, the study of nature alone can ensure success. In the writings of the poets, many images are introduced from external nature ; and allusions are frequently made to the manners and economy of animals. And as modern poets have not the same machinery of gods and goddesses ; of nymphs, fawns, and satyrs, which were so serviceable to the heathen poets of antiquity ; as they cannot employ elves, witches, ghosts, or the wonders of enchantment, with so much advantage as the writers of the old romances ; let them, therefore, be more industrious in studying the scenes of nature : these are so endlessly diversified, that they must always continue to afford abundance of the richest materials for the poet's art ;—materials which have this advantage over allegory and fiction, that they are durable as the present constitution of things. By attending to this principle, Thomson, while he led the way to others, pro-

cured for himself a distinguished place among those whose names are immortal.

But natural history has a relation infinitely more important : for it is one material use of the study of nature, to illustrate this greatest of all truths :—" That there must be a God ; that he must be almighty, omniscient, and infinite in goodness ; and that, although he dwells in a light inaccessible to any mortal eye, yet our faculties see and distinguish him clearly in his works."

In these we are compelled to observe a degree of greatness far beyond our capacities to understand :—we see an exact adaption of parts composing one stupendous whole ; an uniform perfection and goodness that are not only entitled to our admiration, but that command from us the tribute of reverence, gratitude, and love, to the Parent of the Universe. Every step we tread in our observations on nature, affords us indubitable proofs of his superintendence. From these we learn the vanity of all our boasted wisdom, and are taught that useful lesson, humility. We are compelled to acknowledge our dependance on the protecting arm of God, and that, deprived of this support, we must that moment dissolve into nothing.

Every object in the creation is stamped with the characters of the perfection and benevolence of its author. If we examine with accurate discrimination the construction of bodies, and remark

even their most minute parts, we see clearly a necessary dependance that each has upon the other ; and if we attend to the vast concurrence of causes that join in producing the several operations of nature, we shall be induced to believe further, that the whole world is one connected train of causes and effects, in which all the parts, either nearly or remotely, have a necessary dependance on each other. We shall find nothing insulated, nothing dependant only on itself. Each part lends a certain support to the others, and takes in return its share of aid from them.

The empire of nature has, by the general assent of mankind, been divided into three essential kingdoms ; the first consisting of minerals, the second of vegetables, and the third of animals.

The mineral kingdom, which consists of substances destitute of the organs necessary to life or motion, occupies in rude masses the interior parts of the earth. It is formed from the accidental aggregation of particles, which, under certain circumstances, take a constant and regular figure, but which are more frequently found without any definite conformation. The vegetable kingdom clothes the surface of the earth with verdure. It consists of organized bodies destitute of the power of locomotion, or changing place at will. These imbibe nutriment through their roots, respire air by their leaves, and continue their various kinds by means of seeds dispersed within proper limits.



The animal kingdom adorns the external parts of the earth with sentient beings. These have voluntary motion, respire air, are impelled to action by the cravings of want, by love, and by pain. They keep within proper bounds, by preying on them, the numbers both of animals and vegetables.

The latter of these kingdoms was subdivided by Linnæus into six classes, viz. mammiferous animals, which he called mammalia, birds, amphibious animals, fishes, insects, and worms.

The class of animals denominated MAMMALIA comprehends all those that nourish their young by means of lactiferous glands, or teats, and that have, flowing in their veins, a warm and red blood. It includes the whales, an order that, from external shape and habits of life, has usually been arranged among the fishes. It is true that these animals inhabit exclusively the water, an element in which none of the quadrupeds can long subsist, and are furnished like the fish with fins, still, however, in every essential characteristic, they exhibit an alliance to the quadrupeds. They have warm blood, produce their young alive, and nourish them with milk furnished from teats. In their internal structure they are likewise in a great measure allied to the quadrupeds, having similar lungs, and two auricles, and two ventricles to the heart.

Upon comparing the various animals of the globe with each other, we shall find that quadru-

ped demand the rank immediately next to ourselves ; and, consequently, come first in consideration. The similitude between the structure of their bodies and ours, those instincts which they enjoy in a superior degree to the rest, their constant services, or their unceasing hostilities, all render them the foremost objects of our curiosity, and the most interesting parts of animated nature. These, very probably, in the beginning, were nearer upon an equality with us, and disputed with obstinacy, the possession of the earth. Man, while yet savage himself, was but ill qualified to civilize the forest. While yet naked, unarmed, and without shelter, every wild beast was a formidable rival ; and the destruction of such was the first employment of heroes. But when he began to multiply, and arts to accumulate, he soon cleared the plains of the most noxious of his rivals ; a part was taken under his protection and care, while the rest found a precarious refuge in the burning desert, or the howling wilderness.

From being rivals, many quadrupeds have now become the assistants of man ; upon them he devolves the most laborious employments, and finds in them patient and humble coadjutors, ready to obey, and content with the smallest retribution. It was not, however, without long and repeated efforts that the independent spirit of these animals was broken ; for the savage freedom, in wild animals, is generally found to pass down through several generations before it is totally subdued.

Those cats and dogs that are taken from a state of natural wildness in the forest, transmit their fierceness to their young ; and, however concealed in general, it breaks out upon several occasions. Thus the assiduity and application of man in bringing them up, not only alters their disposition, but their very forms ; and the difference between animals in a state of nature and domestic tameness, is so considerable, that M. Buffon has taken this as a principal distinction in classing them.

In taking a cursory view of the form of quadrupeds we may easily perceive that, of all the ranks of animated nature, they bear the nearest resemblance to man. This similitude will be found more striking when erecting themselves on their hinder feet, they are taught to walk forward in an upright posture. We then see that all their extremities in a manner correspond with ours, and present us with a rude imitation of our own. In some of the ape kind the resemblance is so striking, that anatomists are puzzled to find in what part of the human body man's superiority consists ; and scarce any but the metaphysician, who studies the mind, can draw the line that ultimately divides them.

But if we compare their internal structure with our own, the likeness will be found still to increase, and we shall perceive many advantages they enjoy in common with us, above the lower tribes of nature. Like us, they are placed above the class

of birds, by bringing forth their young alive; like us, they are placed above the class of fishes, by breathing through their lungs; like us, they are placed above the class of insects, by having red blood circulating through their veins; and, lastly, like us, they are different from almost all the other classes of animated nature, being either wholly or partly covered with hair. Thus nearly are we represented in point of conformation to the class of animals immediately below us; and this shows what little reason we have to be proud of our persons alone, to the perfection of which quadrupeds make such very near approaches.

Quadrupeds, although they are thus strongly marked, and in general divided from the various kinds around them, yet some of them are often of so equivocal a nature, that it has been asserted, it is hard to tell whether they ought to be ranked in the quadruped class, or degraded to those below them. If, for instance, we were to marshal the whole group of animals around man, placing the most perfect next him, and those most equivocal near the classes they most approach, we should, it is said, find it difficult, after the principal had taken their stations near him, where to place many that lie at the out-skirts of this phalanx. The bat makes a near approach to the aerial tribe, and might, by some, be reckoned among the birds. The porcupine has also some pretensions to that class, being covered with quills, and showing that birds are not the only part of nature that are fur-

nished with such a defence. The armadillo might be referred, though very improperly, to the tribe of insects, or snails, being, like them, covered with a shell; the seal and the morse might be ranked among the fishes, like them being furnished with fins, and almost constantly residing in the same element.

But although the variety in quadrupeds is thus great, they all seem well adapted to the stations in which they are placed. There is scarce one of them, how rudely shaped soever, that is not formed to enjoy a state of happiness fitted to its nature. All its deformities are only relative to us, but all its enjoyments are peculiarly its own. We may superficially suppose the sloth, that takes up many days in climbing a single tree, or the mole, whose eyes are too small for distinct vision, are wretched and helpless creatures; but it is probable that their life, with respect to themselves, is a life of luxury; the most pleasing food is easily obtained; and, as they are abridged in one pleasure, it may be doubled in those which remain. Quadrupeds, and all the lower kinds of animals, have, at worst, but the torments of immediate evil to encounter, and this is but transient and accidental; man has two sources of calamity, that which he foresees, as well as that which he feels; so that, if his rewards were to be in this life alone, then, indeed, would he be of all beings the most wretched.

The heads of quadrupeds, though differing



from each other, are, in general, adapted to their way of living. In some it is sharp, the better to fit the animal for turning up the earth in which its food lies. In some it is long, in order to give a greater room for the olfactory nerves, as in dogs, who are to hunt and find out their prey by the scent. In others it is short, and thick, as in the lion, to increase the strength of the jaw, and to fit it the better for combat. In quadrupeds that feed upon grass, they are enabled to hold down their heads to the ground, by a strong tendinous ligament, that runs from the head to the middle of the back. This serves to raise the head, although it has been held to the ground for several hours, without any labour, or any assistance from the muscles of the neck.

The teeth of all animals are entirely fitted to the nature of their food. Those of such as live upon flesh, differ in every respect from such as live upon vegetables. In the latter, they seem entirely made for gathering and bruising their simple food, being edged before, and fitted for cutting; but broad towards to the back of the jaw, and fitted for pounding. In the carnivorous kinds, they are sharp before, and fitted rather for holding than dividing. In the one, the teeth serve as grindstones, in the other, as weapons of defence; in both, however, the surface of those teeth which serve for grinding are unequal; the cavities and risings fitting those of the opposite, so as to tally exactly when the jaws are brought together.

These inequalities better serve for comminuting the food ; but they become smooth with age ; and, for this reason, old animals take a longer time to chew their food than such as are in the vigour of life.

Their legs are not worse fitted than their teeth to their respective wants or enjoyments. In some they are made for strength only, and to support a vast unweildy frame, without much flexibility or beautiful proportion. Thus the legs of the elephant, the rhinoceros, and the sea-horse, resemble pillars ; were they made smaller, they would be unfit to support the body ; were they endowed with greater flexibility, or swiftness, they would be needless, as they do not pursue other animals for food ; and, conscious of their own superior strength, there are none that they deign to avoid. Deers, hares, and other creatures, that are to find safety only in flight, have their legs made entirely for speed ; they are slender and nervous. Were it not for this advantage, every carnivorous animal would soon make them a prey, and their races would be entirely extinguished. But, in the present state of Nature, the means of safety are rather superior to those of offence ; and the pursuing animal must owe success only to patience, perseverance, and industry. The feet of some, that live upon fish alone, are made for swimming.—The toes of the animals are joined together with membranes, being web-footed, like a goose or a duck, by which they swim with great rapidity. Those

animals that lead a life of hostility, and live upon others, have their feet armed with sharp claws, which some can sheath and unsheath at will. Those, on the contrary, who lead peaceful lives, have generally hoofs, which serve some as weapons of defence ; and which, in all, are better fitted for traversing extensive tracts of rugged country, than the claw-foot of their pursuers.

The stomach is generally proportioned to the quality of the animal's food, or the ease with which it is obtained. In those that live upon flesh, and such nourishing substances, it is small and glandular, affording such juices as are best adapted to digest its contents ; their intestines, also, are short, and without fatness. On the contrary, such animals as feed entirely upon vegetables, have the stomach very large ; and those who chew the cud have no less than four stomachs, all which serve as so many laboritories, to prepare and turn their coarse food into proper nourishment. In Africa, where the plants afford greater nourishment than in our temperate climates, several animals, that with us have four stomachs, have there but two. However, in all animals the size of the intestines are proportioned to the nature of the food ; where that is furnished in large quantities, the stomach dilates to answer the increase. In domestic animals, that are plentifully supplied, it is large ; in the wild animals, that live precariously, it is much more contracted, and the intestines are much shorter.

In this manner, all animals are fitted by nature to fill up some peculiar station. The greatest animals are made for an inoffensive life, to range the plains and the forest without injuring others ; to live upon the productions of the earth, the grass of the fields, or the tender branches of trees. These, secure in their own strength, neither fly from any other quadrupeds, nor yet attack them : nature, to the greatest strength, has added the most gentle and harmless dispositions ; without this, those enormous creatures would be more than a match for all the rest of the creation ; for what devastation might not ensue, were the elephant, or the rhinoceros, or the buffalo, as fierce and as mischievous as the tiger or the rat ? In order to oppose these large animals, and in some measure to prevent their exuberance, there is a species of the carnivorous kind, of inferior strength indeed, but of greater activity and cunning. The lion and the tiger generally watch for the larger kinds of prey, attack them at some disadvantage, and commonly jump upon them by surprise. None of the carnivorous kinds, except the dog alone, will make a voluntary attack, but with the odds on their side. They are all cowards by nature, and usually catch their prey by a bound from some lurking place, seldom attempting to invade them openly ; for the larger beasts are too powerful for them, and the smaller too swift.

A lion does not willingly attack a horse ; and then only when compelled by the keenest hunger,

The combats between a lion and a horse are frequent enough in Italy; where they are both inclosed in a kind of amphitheatre, fitted for that purpose. The lion always approaches wheeling about, while the horse presents its hinder parts to the enemy. The lion in this manner goes round and round, still narrowing his circle, till he comes to the proper distance to make his spring; just at the time the lion springs, the horse lashes with both legs from behind, and, in general, the odds are in his favour; it more often happening that the lion is stunned, and struck motionless by the blow, than that he effects his jump between the horse's shoulders. If the lion is stunned, and left sprawling, the horse escapes, without attempting to improve his victory; but if the lion succeeds, he sticks to his prey, and tears the horse in pieces in a very short time.

But it is not among the larger animals of the forest alone, that these hostilities are carried on; there is a minuter, and a still more treacherous contest between the lower ranks of quadrupeds. The panther hunts for the sheep and the goat; the ocelot, for the hare or the rabbit; and the wild cat for the squirrel or the mouse. In proportion as each carnivorous animal wants strength, it uses all the assistance of patience, assiduity, and cunning. However, the arts of these to pursue, are not so great as the tricks of their prey to escape; so that the power of destruction in one class, is inferior to the power of safety in the other. Were



this otherwise, the forest would soon be dispeopled of the feebler race of animals ; and beasts of prey themselves, would want, at one time, that subsistence which they lavishly destroyed at another.

Few wild animals seek their prey in the day-time ; they are then generally deterred by their fears of man in the inhabited countries, and by the excessive heat of the sun in those extensive forests that lie towards the south, and in which they reign the undisputed tyrants. As soon as the morning, therefore, appears, the carnivorous animals retire to their dens ; and the elephant, the horse, the deer, and all the hare kinds, those inoffensive tenants of the plain, make their appearance. But again, at night-fall, the state of hostility begins ; the whole forest then echoes to a variety of different howlings. Nothing can be more terrible than an African landscape at the close of evening : the deep-toned roarings of the lion ; the shriller yellings of the tiger ; the jackall, pursuing by the scent, and barking like a dog ; the hyæna, with a note peculiarly solitary and dreadful ; but above all, the hissing of the various kinds of serpents, that then begin their call, and, as we are assured, make a much louder symphony than the birds in our groves in a morning.

Beasts of prey seldom devour each other ; nor can any thing but the greatest degree of hunger induce them to it. What they chiefly seek after,

is the deer, or the goat ; those harmless creatures, that seem made to embellish nature. These are either pursued or surprised, and afford the most agreeable repast to their destroyers. The most usual method with even the fiercest animals, is to hide and crouch near some path frequented by their prey ; or some water where cattle come to drink ; and seize them at once with a bound. The lion and the tiger leap twenty feet at a spring ; and this, rather than their swiftness or strength, is what they have most to depend upon for a supply. There is scarcely one of the deer, or hare kind, that is not very easily capable of escaping them by its swiftness ; so that whenever any of these fall a prey, it must be owing to their own inattention.

But there is another class of the carnivorous kind, that hunt by the scent, and which it is much more difficult to escape. It is remarkable, that all animals of this kind pursue in a pack ; and encourage each other by their mutual cries. The jackall, the wolf, and the dog, are of this kind : they pursue with patience, rather than swiftness : their prey flies at first, and leaves them for miles behind ; but they keep on with a constant steady pace, and excite each other by a general spirit of industry and emulation, till at last, they share the common plunder. But it too often happens, that the larger beasts of prey, when they hear a cry of this kind begun, pursue the pack, and when they have hunted down the animal, come in and monopolize the spoil. This has given rise to the report

of the jackall's being the lion's provider ; when the reality is, that the jackall hunts for itself, and the lion is an unwelcome intruder upon the fruit of his toil.

Nevertheless, with all the powers which carnivorous animals are possessed of, they generally lead a life of famine and fatigue. Their prey has such a variety of methods for escaping, that they sometimes continue without food for a fortnight together ; but nature has endowed them with a degree of patience equal to the severity of their state ; so that as their subsistence is precarious, their appetites are complying. They usually seize their prey with a roar, either of seeming delight, or perhaps to terrify it from resistance. They frequently devour it, bones and all, in the most ravenous manner ; and then retire to their dens, continuing inactive till the calls of hunger again excite their courage and industry. But as all their methods of pursuit are counteracted by the arts of evasion, they often continue to range without success, supporting a state of famine for several days, nay, sometimes, weeks together. Of their prey, some find protection in holes, in which nature has directed them to bury themselves ; some find safety by swiftness ; and such as are possessed of neither of these advantages, generally herd together, and endeavour to repel invasion by united force. The very sheep, which to us seem so defenceless, are by no means so in a state of nature ; they are furnished with arms of defence, and a

very great degree of swiftness ; but they are still further assisted by their spirit of mutual defence ; the females fall into the centre ; and the males, forming a ring round them, oppose their horns to the assailants. Some animals, that feed upon fruits, which are to be found only at one time of the year, fill their holes with several sorts of plants, which enable them to lie concealed during the hard frosts of the winter, contented with their prison, since it affords them plenty and protection. These holes are dug with so much art, that there seems the design of an architect in the formation. There are usually two apertures, by one of which the little inhabitant can always escape, when the enemy is in possession of the other. Many creatures are equally careful of avoiding their enemies, by placing a centinel to warn them of the approach of danger. These generally perform this duty by turns ; and they know how to punish such as have neglected their post, or have been unmindful of the common safety. Such are a part of the efforts that the weaker races of quadrupeds exert to avoid their invaders ; and, in general, they are attended with success. The arts of instinct are most commonly found an overmatch for the invasions of instinct. Man is the only creature against whom all their little tricks cannot prevail. Wherever he has spread his dominion, scarce any flight can save, or any retreat harbour ; wherever he comes, terror seems to follow, and all society ceases among the inferior tenants of the plain ; their union against him can yield them no protection,

and their cunning is but weakness. In their fellow brutes, they have an enemy whom they can oppose with an equality of advantage ; they can oppose fraud or swiftness to force ; or numbers to invasion ; but what can be done against such an enemy as man, who finds them out though unseen, and though remote destroys them ? Wherever he comes, all the contest among the meaner ranks seem to be at an end, or is carried only by surprise. Such as he has thought proper to protect, have calmly submitted to his protection ; such as he has found convenient to destroy, carry on an unequal war, and their numbers are every day decreasing.

The wild animal is subject to few alterations ; and, in a state of savage nature, continues for ages the same, in size, shape, and colour. But it is otherwise when subdued, and taken under the protection of man ; its external form, and even its internal structure, are altered by human assiduity : and this is one of the first and greatest causes of the variety that we see among the several quadrupeds of the same species. Man appears to have changed the very nature of domestic animals, by cultivation and care. A domestic animal is a slave that seems to have few other desires but such as man is willing to allow it. Humble, patient, resigned, and attentive, it fills up the duties of its station ; ready for labour, and content with subsistence.

Almost all domestic animals seem to bear the marks of servitude strong upon them. All the

varieties in their colour, all the fineness and length of their hair, together with the depending length of their ears, seem to have arisen from a long continuance of domestic slavery. What an immense variety is there to be found in the ordinary race of dogs and horses ; the principal differences of which has been effected by the industry of man, so adapting the food, the treatment, the labour, and the climate, that the tame animal seems in some instances no longer to have any resemblance to his ancestors in the woods around him.

In this manner, nature is under a kind of constraint, in those animals we have taught to live in a state of servitude near us. The savage animals preserve the marks of their first formation ; their colours are generally the same ; a rough dusky brown, or a tawny, seem almost their only varieties. But it is otherwise in the tame ; their colours are various, and their forms different from each other. The nature of the climate, indeed, operates upon all ; but more particularly on these. That nourishment which is prepared by the hand of man, not adapted to their appetites, but to suit his own convenience, that climate, the rigours of which he can soften, and that employment to which they are sometimes assigned, produce a number of distinctions that are not to be found among the savage animals. These at first were accidental, but in time became hereditary ; and a new race of artificial monsters are propagated, rather to answer to the purposes of human pleasure, than their own convenience. In short, their very ap-

petites may be changed ; and those that feed only upon grass may be rendered carnivorous. Goldsmith saw a sheep that would eat flesh, and a horse that was fond of oysters.

But not their appetites, or their figure alone, but their very dispositions, and their natural sagacity, are altered by the vicinity of man. In those countries where men have seldom intruded, some animals have been found, established in a kind of civil state of society. Remote from the tyranny of man, they seem to have a spirit of mutual benevolence, and mutual friendship. The beavers, in these distant solitudes, are known to build like architects, and rule like citizens. The habitations that these have been seen to erect, exceed the houses of the human inhabitants of the same country, both in neatness and convenience. But as soon as man intrudes upon their society, they seem impressed with the terrors of their inferior situation, their spirit of society ceases, the bond is dissolved, and every animal looks for safety in solitude, and there tries all its little industry to shift only for itself.

Next to human influence, the climate seems to have the strongest effects both upon the nature and form of quadrupeds. As in man, we have seen some alterations, produced by the variety of his situation ; so in the lower ranks that are more subject to variation, the influence of climate is more readily perceived. As these are more nearly

attached to the earth, and in a manner connected to the soil ; as they have none of the arts of shielding off the inclemency of the weather, or softening the rigours of the sun, they are consequently more changed by its variations. In general, it may be remarked, that the colder the country, the larger and the warmer is the fur of each animal ; it being wisely provided by nature, that the inhabitant should be adapted to the rigours of its situation. Thus the fox and wolf, which in temperate climates have but short hair, have a fine long fur in the frozen regions near the pole. On the contrary, those dogs which with us have long hair, when carried to Guinea, or Angola, in a short time cast their thick covering, and assume a lighter dress, and one more adapted to the warmth of the country. The beaver, and the ermine, which are found in the greatest plenty in the cold regions, are remarkable for the warmth and delicacy of their furs ; while the elephant, and the rhinoceros, that are natives of the line, have scarcely any hair. Not but that human industry can, in some measure, co-operate with, or repress the effects of climate in this particular. It is well known what alterations are produced by proper care, in the sheep's fleece, in different parts of our own country ; and the same industry is pursued with a like success in Syria and Cashmire, where many of their animals are clothed with a long and beautiful hair, which they take care to improve, as they work it into that stuff called camblet, so well known in different parts of Europe.



The disposition of the animal seems also not less marked by the climate than the figure. Both at the line and the pole, the wild quadrupeds are fierce and untameable. In these latitudes, their savage dispositions having not been quelled by any efforts from man, and being still farther stimulated by the severity of the weather, they continue fierce and untractable. Most of the attempts which have hitherto been made to tame the wild beasts brought home from the pole or the equator have proved ineffectual. They are gentle and harmless enough while young ; but as they grow up, they acquire their natural ferocity, and snap at the hand that feeds them. It may indeed, in general, be asserted, that in all countries where the men are most barbarous, the beasts are most fierce and cruel : and this is but a natural consequence of the struggle between man and the more savage animals of the forest ; for in proportion as he is weak and timid, they must be bold and intrusive ; in proportion as his dominion is but feebly supported, their rapacity must be more obnoxious. In the extensive countries, therefore, lying round the pole, or beneath the line, the quadrupeds are fierce and formidable. Africa has ever been remarked for the uncivilized condition of its men, and the fierceness of its animals : its lions and its leopards are not less terrible than its crocodiles and its serpents ; their dispositions seem entirely marked with the rigours of the climate ; and being bred in an extreme of heat, they show a peculiar ferocity, that neither the force of man can conquer, nor his arts

allay. However, it is happy for the wretched inhabitants of those climates, that its most formidable animals are all solitary ones; that they have not learnt the art of uniting, to oppress mankind; but each, depending on its own strength, invades without any assistant.

The food also is another cause in the variety, which we find among the quadrupeds of the same kind. Thus the beasts which feed in the valley are generally larger than those which glean a scanty subsistence on the mountain. Such as live in the warm climates, where the plants are much larger and more succulent than with us, are equally remarkable for their bulk. The ox fed in the plains of Indostan, is much larger than that which is more hardily maintained on the side of the Alps. The deserts of Africa, where the plants are extremely nourishing, produce the largest and fiercest animals; and, perhaps, for a contrary reason, America is found not to produce such large animals as are seen in the antient continent. But, whatever be the reason, the fact is certain, that while America exceeds us in the size of its reptiles of all kinds, it is far inferior in its quadruped productions. Thus, for instance, the largest animal of that country is the tapir, which can by no means be compared to the elephant of Africa. Its beasts of prey also, are divested of that strength and courage which is so dangerous in this part of the world. The American lion, tiger, and leopard, if such diminutive creatures deserve these names,

are neither so fierce nor so valiant as those of Africa and Asia. The tiger of Bengal has been seen to measure twelve feet in length, without including the tail ; whereas the American tiger seldom exceeds three. This difference obtains still more in the other animals of that country, so that some have been of opinion, though without sufficient reason, that all quadrupeds in Southern America are of a different species from those most resembling them in the old world ; and that there are none which are common to both, but such as have entered America by the north ; and which, being able to bear the rigours of the frozen pole, have travelled from the antient continent, by that passage, into the new.

But, if the quadrupeds of the new continent be less, they are found in much greater abundance ; for it is a rule that obtains through nature, that the smallest animals multiply the fastest. The goat imported from Europe to South America, soon begins to degenerate ; but as it grows less it becomes more prolific ; and, instead of one kid at a time, or two at the most, it generally produces five, and sometimes more. What there is in the food, or the climate, that produces this change, we have not been able to learn ; we might be apt to ascribe it to the heat, but that on the African coast, where it is still hotter, this rule does not obtain ; for the goat, instead of degenerating there, seems rather to improve.

However, the rule is general among all quadrupeds, that those which are large and formidable produce but a few at a time : while such as are small and contemptible are extremely prolific. The lion, or tiger, have seldom above two cubs at a litter : while the cat, that is of a similar nature, is usually seen to have five or six. In this manner, the lower tribes become extremely numerous ; and, but for this surprising fecundity, from their natural weakness, they would quickly be extirpated. The breed of mice, for instance, would have long since been blotted from the earth, were the mouse as slow in production as the elephant. But it has been wisely provided that such animals as can make but little resistance, should at least have a means of repairing the destruction, which they must often suffer, by their quick reproduction ; that they should increase even among enemies, and multiply under the hand of the destroyer. On the other hand, it has as wisely been ordered by Providence, that the larger kinds should produce but slowly ; otherwise, as they require proportional supplies from nature, they would quickly consume their own store ; and, of consequence, many of them would soon perish through want ; so that life would thus be given without the necessary means of subsistence. In a word, Providence has most wisely balanced the strength of the great against the weakness of the little. Since it was necessary that some should be great and others mean, since it was expedient that some should live

upon others, it has assisted the weakness of one by granting it fruitfulness ; and diminished the number of the other by fecundity.

In consequence of this provision, the larger creatures, which bring forth few at a time, seldom begin to degenerate till they have nearly acquired their full growth. On the contrary, those which bring many, reproduce before they have arrived to half their natural size. Thus the horse and the bull are nearly at their best before they begin to breed ; the hare and the rabbit scarce leave the teat before they become parents in turn. Almost all animals likewise continue the time of their pregnancy in proportion to their size, The mare continues eleven months with foal, the cow nine, the wolf five, and the bitch nine weeks. In all, the intermediate litters are the most fruitful ; the first and the last generally producing the fewest in number and the worst of the kind.

Whatever be the natural disposition of animals at other times, they all acquire new courage when they consider themselves as defending their young. No terrors can then drive them from the post of duty ; the mildest begin to exert their little force, and resist the most formidable enemy. Where resistance is hopeless, they then incur every danger, in order to rescue their young by flight, and retard their own expedition by providing for their little ones. When the female opossum, an animal of America, is pursued, she instantly takes her

young into a false belly, with which nature has supplied her, and carries them off, or dies in the endeavour. But, if at this period the mildest animals acquire new fierceness, how formidable must those be that subsist by rapine ! At such times, no obstacles can stop their ravage, nor no threats can terrify ; the lioness then seems more hardy than even the lion himself. She attacks men and beasts indiscriminately, and carries all she can overcome reeking to her cubs, whom she thus early accustoms to slaughter. Milk, in the carnivorous animals, is much more sparing than in others ; and it may be for this reason that all such carry home their prey alive, that, in feeding their young, its blood may supply the deficiencies of nature, and serve instead of that milk, with which they are so sparingly supplied.

Nature, that has thus given them courage to defend their young, has given them instinct to choose the proper times of copulation, so as to bring forth when the provision suited to each kind is to be found in the greatest plenty. The wolf, for instance, couples in December, so that the time of pregnancy continuing five months it may have its young in April. The mare, who goes eleven months, admits the horse in summer, in order to foal about the beginning of May. On the contrary, those animals which lay up provisions for the winter, such as the beaver and the marmotte, couple in the latter end of autumn, so as to have their young about January, against which season they have

provided a very comfortable store. These seasons for coupling, however, among some of the domestic kinds, are generally in consequence of the quantity of provisions with which they are at any time supplied. Thus we may, by feeding any of these animals, and keeping off the rigour of the climate, make them breed whenever we please. In this manner those contrive who produce lambs all the year round.

The choice of situation in bringing forth is also very remarkable. In most of the rapacious kinds, the female takes the utmost precautions to hide the place of her retreat from the male ; who otherwise, when pressed by hunger, would be apt to devour her cubs. She seldom, therefore, strays far from the den, and never approaches it while he is in view, nor visits him again till her young are capable of providing for themselves. Such animals as are of tender constitutions take the utmost care to provide a place of warmth, as well as safety, for their young ; the rapacious kinds bring forth in the thickest woods ; those that chew the cud, with the various tribes of the vermin kind, choose some hiding-place in the neighbourhood of man. Some dig holes in the ground ; some choose the hollow of a tree ; and all the amphibious kinds bring up their young near the water, and accustom them betimes to their proper element.

Mammalia, or viviparous quadrupeds, are distributed by Linnæus into seven orders, viz. Pri-

mates, bruta, feræ, glires, pecora, belluæ, and cete.

The primates are remarkable for a nearer approach to the human form than is exhibited in the other quadrupeds. The bats, however, which are by Linnæus ranked in this order, differ greatly from the rest. The principal character of the primates, consists in the teeth, which, except in the bats, strongly resemble the human.

The bruta have no front, or cutting teeth, either in the upper or under jaw ; their feet are armed with strong claws ; their pace is, in general, somewhat slow, and their food is principally vegetable.

The feræ have generally six cutting teeth, of a somewhat conical shape, both in the upper and under jaw ; these are succeeded by strong and sharp fangs, or canine teeth ; and the grinders are formed into conical, or pointed processes : this tribe is predacious, living principally on the flesh of other animals : the feet are armed with sharp claws.

The glires are furnished with two remarkable large, long, fore teeth, both above and below ; but have no canine, or sharp lateral teeth ; their feet are provided with claws, and their general pace is more or less salient, or leaping ; their food is vegetable ; consisting of roots, barks, fruits, &c.

The pecora, among which are comprised what we commonly call cattle, have no front teeth in the



upper jaw, but several, viz. six or eight in the lower; their feet are furnished with cloven, or divided hoofs; their food is entirely vegetable, and they possess the remarkable power of rumination, or throwing up again into the mouth the food they have first swallowed, in order that it may be still further reduced, or comminuted by the teeth. This remarkable process is assisted by the peculiar structure of the stomach, which, in these animals, is divided into four cavities, each having its peculiar office.

The belluæ have obtuse front teeth; the feet are furnished with hoofs, in some whole, or rounded, in others obscurely lobed or subdivided; their food is vegetable.

The cete consists of the whales, which, though resembling fishes as to general form or outline, are real mammalia in disguise; having similar bones, lungs, teats, &c. &c. Their teeth are frequently less osseous than in other mammalia. They feed on soft marine animals and vegetables, and swim chiefly by means of their pectoral, or breast fins, in which are inclosed the bones of the fore feet. Their tail is horizontal, and they are furnished with breathing holes on the top of the head, through which they occasionally spout the water.



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## QUADRUPEDS.

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### APE TRIBE.

**T**HIS numerous family is distinguished from all others, by the animals having in each jaw four front teeth, placed near together; the canine teeth longer than the rest, and distant from them, and the grinders obtuse.

The animals belonging to this tribe bear a considerable resemblance, both in external and internal structure, to the human race: and in their habits and instincts we remark a much nearer approach to us, than in those of any other division of animated nature. They are endowed with memories exceedingly retentive; they are also suspicious, agile, fond of imitation, and full of gesticulations and grimace; when offended, they assume threatening gestures, and chatter with their teeth; but when any thing pleases them they are seen to laugh. The dispositions of many of the species are so wild and unmanageable, that it is with difficulty they can be brought into a state of domestication. Others are indeed of a milder nature, and exhibit some degree of attachment to those who are kind to them, but nearly the whole tribe are endowed with mischievous propensities. They are also in general filthy, obscene, and thievish.

All the species, except one, (the Barbary ape,) are confined within the limits of the torrid zone, where, for the most part, they live on vegetable food ; and although our books on natural history enumerate about sixty species, we are given to understand that these are but a small proportion of the numbers that have even been observed in the forests of hot climates. Bosman says he saw an immense number of different kinds on the coast of Africa, and Condamine tells us, that it would occupy a volume to describe accurately only the specific characters of those to be found along the banks of the great river Amazons. They abound in the forests of Africa, India, China, Japan, and South America.

Several of this tribe have pouches in their cheeks in which they macerate their food for some time before they chew and swallow it. They are fond of hunting after fleas, both in their own fur, and in that of their companions. Few animals have a more delicate sense of feeling, or are agitated by more violent passions. Most of them are gregarious, associating in vast companies, and leaping with great agility among the branches of the trees ; but the different species always keep apart, and in separate districts, never intermixing with each other.

In many parts of India the animals of the ape tribe are made objects of worship by the natives, and temples of the greatest magnificence are erected in their honour. Their numbers are almost infinite. They frequently come in troops into the cities, and they enter the houses at all times with perfect freedom ; in Calicut, however, the inhabitants keep them in a great measure out of their dwellings, but to effect this, they are compelled to have their windows latticed. In Amadabad, the capital of Guzarat, there are

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three hospitals for animals, where lame and sick monkies, and even those which (without being diseased) chuse to dwell there, are fed and cherished. Twice every week the monkies of the neighbourhood assemble spontaneously in the streets of the city. They then mount upon the houses, each of which has a small terrace or flat roof, where they lie during the great heats. On these two days the inhabitants always carefully deposit on the terraces rice, millet, or fruit ; for whenever, by any accident, they are prevented from doing it, the disappointed animals become so furious, that they break the tiles, and commit various other outrages.

When the Portuguese plundered the island of Ceylon, they found in one of the temples dedicated to these animals, a small golden casket, containing the tooth of an ape. This relic the natives held in such superstitious veneration, that they offered no less than seven hundred thousand ducats to redeem it. The viceroy, however, in order to stop the progress of idolatry, directed it to be burnt. About three years afterwards, a fellow who accompanied the Portuguese ambassador, having got a similar tooth, pretended that he had recovered the old one, which so rejoiced the priests, that we are informed they purchased it for a sum of upwards of ten thousand pounds sterling.

This numerous race may be properly divided into four sections : viz. 1. Apes ; or such as are destitute of a tail. 2. Baboons ; or such as have very muscular bodies, and whose tails are commonly short. 3. Monkies, whose tails are in general long : and lastly, sapajous, or monkies with what are termed prehensile tails ; viz. such as can at pleasure be twisted round any ob-

ject, so as to answer the purpose of an additional hand to the animal.

### GREAT APE, OR ORAN OTAN.

OF this species the individuals are from two to five or six feet high. Shaggy, reddish brown, dusky, and black hairs, scarce an inch long, cover the body thinly over. On the head, the back, and the buttocks, the hair is longer than on the other parts. The brow is bare; the face is flat, and presents a deformed imitation of the human countenance; the ears are shaped exactly like ours; the colour of the face and paws is tawny.

Upon the whole, it appears clearly that there are two distinct species of this animal: viz. the reddish brown, or chesnut oran otan, called the jocko, which is a native of Borneo, and some other Indian islands, and the pongo, or great black oran otan, which is a native of Africa.

Of the smaller sort of these animals we have had several, at different times, brought into this country, all nearly alike; but that observed by Dr. Tyson, is the best known, having been described with the greatest exactness. It was brought from Angola in Africa, where it had been taken in the internal parts of the country, in company with a female of the same kind, that died by the way. The body was covered with hair, which was of a coal black colour, more resembling human hair than that of brutes. It bore a still stronger similitude in its different lengths; for in those places where it is longest on the human species, it was also longest in this; as on the head, the upper lip, the chin, and the pubes. The face was like that of a man, the forehead larger, and the head round. The up-

per and lower jaw were not so prominent as in monkies ; but flat, like those of a man. The ears were like those of men in most respects ; and the teeth had more resemblance to the human than those of any other creature. The bending of the arms and legs were just the same as in a man ; and, in short, the animal, at first view, presented a figure entirely human.

In order to discover its differences, it was necessary to make a closer survey ; and then the imperfections of its form began to appear. The first obvious difference was in the flatness of the nose ; the next in the lowness of the forehead, and the wanting the prominence of the chin. The ears were proportionably too large ; the eyes too close to each other ; and the interval between the nose and mouth too great. The body and limbs differed, in the thighs being too short and the arms too long ; in the thumb being too little, and the palm of the hand too narrow. The feet also were rather more like hands than feet ; and the animal, if we may judge from the figure, bent too much upon its haunches.

When this creature was examined anatomically, a surprising similitude was seen to prevail in its internal conformation. It differed from man in the number of its ribs, having thirteen ; whereas, in man there are but twelve. The vertebræ of the neck also were shorter, the bones of the pelvis narrower, the orbits of the eyes were deeper, the kidneys were rounder, the urinary and gall bladders were longer and smaller, and the ureters of a different figure. Such were the principal distinctions between the internal parts of this animal and those of man ; in almost every thing else they were entirely and exactly the same, and discovered an astonishing congruity. Indeed, many parts were so much alike in conformation, that

it might have excited wonder, how they were productive of such few advantages. The tongue, and all the organs of the voice, were the same; and yet the animal was dumb; the brain was formed in the same manner with that of man, and yet the creature wanted reason: an evident proof (as M. Buffon finely observes) that no disposition of matter will give mind; and that the body, how nicely soever formed, is formed in vain, when there is not infused a soul to direct its operations.

From a picture so like that of the human species, we are naturally led to expect something of a corresponding mind; and it is certain, that such of these animals as have been shown in Europe, have discovered a degree of imitation beyond what any quadruped can arrive at.

That of Tyson was a gentle, fond, harmless creature. In its passage to England, it would embrace with the greatest tenderness, those that it knew on shipboard, opening their bosoms, and clasping its hands about them. Monkeys of a lower species it held in utter aversion; it would always avoid the place where they were kept in the same vessel; and seemed to consider itself as a creature of higher extraction. After it was taken, and a little used to wear clothes, it grew very fond of them; a part it would put on without any help, and the rest it would carry in its hands to some of the company, for their assistance. It would lie in a bed, place its head on the pillow, and pull the clothes upwards, as a man would do.

That which was seen by Edwards, and described by Buffon, shewed even a superior degree of sagacity. It walked, like all of its kind, upon two legs, even though it carried burdens. Its air was melancholy, and its deportment grave,

Unlike the baboon or monkey, whose motions are violent and appetites capricious, who are fond of mischief, and obedient only from fear, this animal was slow in its motions, and a look was sufficient to keep it in awe. "I have seen it," says M. Buffon, "give its hand to show the company to the door; I have seen it sit at table, unfold its napkin, wipe its lips, make use of the spoon and the fork to carry the victuals to its mouth, pour out its drink into a glass, touch glasses when invited, take a cup and saucer and set them on the table, put in sugar, pour out its tea, leave it to cool before drinking, and all this without any other instigation than the signs or the command of its master, and often of its own accord." It was gentle and inoffensive; it even approached strangers with respect, and came rather to receive caresses than to offer injuries. It was particularly fond of sugared comfits, which every body was ready to give it; and, as it had a cough, so much sugar contributed to increase the disorder and shorten its life. It continued at Paris but one summer, and died in London. It ate indiscriminately of all things, but it preferred dry and ripe fruits to all other aliments. It would drink wine, but in small quantities, and gladly left it for milk, tea, or any other sweet liquor.

M. Vosmaer's account of the manners of an oran otan, brought into Holland in the year 1776, and lodged in the menagerie of the prince of Orange, is exceedingly curious.

"This animal," says M. Vosmaer, "was a female: its height was about two Rhenish feet and a half. It shewed no symptoms of fierceness or malignity, and was even of a somewhat melancholy appearance. It was fond of being in company, and shewed a preference to those who took

daily care of it, of which it seemed to be sensible. Often when they retired, it would throw itself on the ground, as if in despair, uttering lamentable cries, and tearing in pieces the linen within its reach. Its keeper having sometimes been accustomed to sit near it on the ground, it frequently took the hay of its bed, and laid it by its side, and seemed by every demonstration, to invite him to be seated near. Its usual manner of walking was on all fours, like other apes ; but it could also walk erect. One morning it got unchained, and we beheld it with wonderful agility ascend the beams and rafters of the building ; it was not without some pains that it was retaken, and we then remarked an extraordinary muscular power in the animal ; the assistance of four men being necessary in order to hold it in such a manner as to be properly secured. During its state of liberty it had, amongst other things, taken the cork from a bottle of Malaga wine, which it drank to the last drop, and had set the bottle in its place again. It ate almost every thing that was given to it ; but its chief food was bread, roots, and especially carrots ; all sorts of fruits, especially strawberries : and it appeared extremely fond of aromatic plants, and of the leaves and root of parsley. It also ate meat, both boiled and roasted, as well as fish. It was not observed to hunt for insects, like other monkeys ; was fond of eggs, which it broke with its teeth, and sucked completely ; but fish and roasted meat seemed its favourite food. It had been taught to eat with a spoon and a fork. When presented with strawberries on a plate, it was extremely pleasant to see the animal take them up, one by one, with a fork, and put them into its mouth, holding, at the same time, the plate in the other hand. Its common drink was water,

but it also very willingly drank all sorts of wine, and particularly Malaga. After drinking, it wiped its lips; and after eating, if presented with a tooth-pick, would use it in a proper manner. I was assured, (continues this writer,) that on shipboard it ran freely about the vessel, played with the sailors, and would go, like them, into the kitchen for its mess. At the approach of night it lay down to sleep, and prepared its bed, by shaking well the hay on which it slept, and putting it in proper order; and lastly, covering itself warm with the coverlet. One day, seeing the padlock of its chain opened with a key, and shut again, it seized a little bit of stick, and put it into the key hole, turning it about in all directions, endeavouring to see whether the padlock would open or not. This animal lived seven months in Holland. On its first arrival, it had but very little hair, except on its back and arms: but on the approach of winter it became extremely well covered; the hair on the back being three inches in length. The whole animal then appeared of a chesnut colour; the skin of the face, &c. was of a mouse colour, but about the eyes and round the mouth of a dull flesh colour." It came from the island of Borneo, and, after its death, was deposited in the museum of the prince of Orange.

Gemelli Carreri gives an instance of something very analogous to reason in these animals. He tells us that when the fruits on the mountains are exhausted, they frequently descend to the sea-coasts, where they feed on various species of shell-fish, but in particular on a large species of oyster, which commonly lies open on the shore: "Fearful," he says, "of putting in their paws, lest the oyster should close and crush them, they insert a pretty large stone within the shell; this

prevents it from closing, and they then drag out their prey, and devour it at leisure."

Pere Carbasson brought up an oran otan, which became so fond of him, that wherever he went it always seemed desirous of accompanying him: whenever, therefore, he had to perform the service of his church, he was always under the necessity of shutting it up in a room. Once, however, the animal escaped, and followed the father to the church; where, silently mounting on the sounding board above the pulpit, he lay perfectly still till the sermon commenced. He then crept to the edge, and, overlooking the preacher, imitated all his gestures in so grotesque a manner that the whole congregation were unavoidably urged to laugh. The father, surprised and confounded at this ill-timed levity, severely reprov'd his audience for their inattention. The reproof failed in its effect; the congregation still laughed, and the preacher, in the warmth of his zeal, redoubled his vociferations and his actions: these the ape imitated so exactly, that the congregation could no longer restrain themselves, but burst out into a loud and continued laughter. A friend of the preacher at length stepped up to him, and pointed out the cause of this improper conduct; and such was the arch demeanour of his animal, that it was with the utmost difficulty he could command the muscles of his countenance, and keep himself apparently serious, while he ordered the servants of the church to take him away.

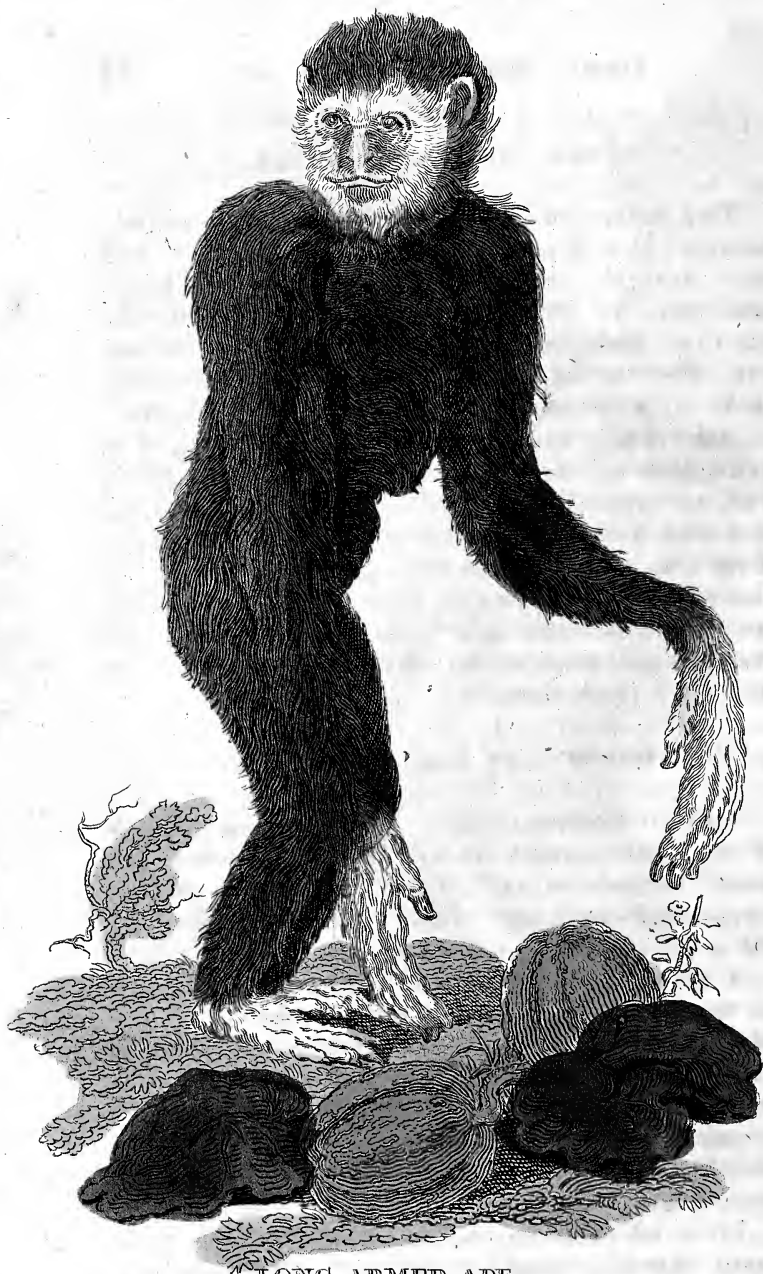
Such are the habitudes and the powers of the smaller class of these extraordinary creatures; but we are presented with a very different picture in those of a larger stature and more muscular form. The little animals we have been describing, which are seldom found above four feet high, seem to



partake of the nature of dwarfs among the human species, being gentle, assiduous, and playful, rather fitted to amuse than terrify. But the gigantic races of the oran otan, seen and described by travellers, are truly formidable ; and in the gloomy forests, where only they are found, seem to hold undisputed dominion. Many of these are as tall, or taller than a man ; active, strong, and intrepid ; cunning, lascivious, and cruel. This redoubtable rival of mankind is found in many parts of Africa, in the East Indies, in Madagascar, and in Borneo. In the last of these places, the people of quality course him as we do the stag ; and this sort of hunting is one of the favourite amusements of the king himself. This creature is extremely swift of foot, endowed with extraordinary strength, and runs with prodigious celerity. His skin is all hairy, his eyes sunk in his head, his countenance stern, his face tanned, and all his lineaments, though exactly human, harsh and blackened by the sun. In Africa this creature is even still more formidable. Battel calls him the pongo, and assures us that in all his proportions he resembles a man, except that he is much larger, even to a gigantic state. His face resembles that of a man, the eyes are deep sunk in the head, the hair on each side is extremely long, the visage is naked and without hair, as are also the ears and the hands. The body is lightly covered, and scarcely differing from that of a man, except that there are no calves to the legs. Still, however, the animal is seen to walk upon his hinder legs, and in an erect posture. He sleeps under trees, and is said to build himself a hut, which serves to protect him against the sun and the rains of the tropical climates. He lives only upon fruits, and is no way carnivorous. He cannot speak, although furnished with

greater instinct than any other animal of the brute creation. When the negroes make a fire in the woods, this animal comes near and warms himself by the blaze. However, he has not skill enough to keep the flame alive by feeding it with fuel. They go together in companies; and if they happen to meet one of the human species, remote from succour, they generally show him no mercy. They even attack the elephant, which they beat with their clubs, and oblige to leave that part of the forest which they claim as their own. It is impossible to take any of those dreadful creatures alive, for they are so strong, that ten men would not be a match for one of them. None of this kind, therefore, are taken, except when very young, and these but rarely, when the female happens to leave them behind; for in general they keep clung to the breast, and adhere both with their legs and arms. From the same traveller we learn, that when one of these animals dies, the rest cover the body with a quantity of leaves and branches. They sometimes, however, show mercy to the human kind. A negro boy, that was taken by one of these, and carried into the woods, continued there a whole year, without receiving any injury. From another traveller we learn, that these animals often attempt to surprise the female negroes as they go into the woods, and frequently keep them against their wills for the pleasure of their company, feeding them very plentifully all the time. He assures us that he knew a woman of Loango that had lived among these animals for three years.





LONG ARMED APE.

PIGMY APE, OR PITHEQUE.

THE flatness of their face and nails, the nakedness of their buttocks, the want of a tail, and their upright carriage, give this species some resemblance to the human form. They are the smallest apes, being not larger than a common cat; the colour of the upper part of the body is an olive brown, and beneath it is yellowish.

Individuals are often to be seen among our exhibitions of wild beasts. They feed on fruits; but are greedy of insects, particularly of ants, and search for them with eagerness and dexterity. They are numerous in Ethiopia. This race are the pigmies of antiquity, represented as a dwarfish nation of mankind, who waged war with cranes, and were at length utterly destroyed by their victorious enemies.

GIEBON, OR LONG-ARMED APE,

Is easily distinguished by the prodigious length of his arms, which touch the ground when the animal stands erect. His flat swarthy visage, surrounded with grey hairs, his erect carriage, the want of a tail, flat nails, and round naked ears, give this creature also a distant resemblance of the human figure, though hideously deformed. His body is rough, all covered with black hair, except his buttocks, which are bare. His feet are long; his eyes are large, but sunk deep in their sockets. His canine teeth are proportionably larger than those of man. His height from two and a half to four feet.

These animals are mild and gentle in their manners. Their movements are not too precipitate, but lively and quick. They are said always to

walk erect. They inhabit the East Indies, where they are seen by hundreds, on the tops of trees.

The white gibbon is generally considered as a variety of the former ; from which it differs, in being entirely white, except the face and hands, which are black.

#### MAGOT, OR BARBARY APE.

THIS creature is a remove still farther from the human form. Its face is long, and resembles that of a bull-dog. Agréable to this character, its canine teeth are both long and strong. Its ears resemble those of the human species ; its nails are flat. The upper part of its body is of a dirty greenish brown, and its belly of a dull pale yellow. It has down on its face, and cheek pouches. It has also large prominent callosities on its buttocks, and a small appendix of skin, apt to be mistaken for a tail. It walks on the two hind feet at times, but more frequently on all four. When erect upon its two hind legs, it is generally two feet and a half high ; some are three, others are found four feet in height. Apes of this species inhabit many parts of India, Arabia, and all parts of Africa, except Egypt. They live on vegetables, and are said to assemble at times in the open plains of India, in vast troops, and if they see any of the women going to market, they attack them, and take away their provisions. Tavernier, apparently alluding to this species, says, that some of the inhabitants of India have an odd mode of amusing themselves at their expence. These people place five or six baskets of rice, forty or fifty yards asunder, in an open ground near their retreat, and by every basket put a number of stout cudgels, each about two feet long : they then retire to some hiding place, not far

distant, to wait the event. When the apes observe no persons near the baskets, they soon descend in great numbers from the trees, and run towards them. They grin at each other for some time before they dare approach; sometimes they advance, then retreat, seeming much disinclined to encounter. At length the females, which are more courageous than the males, especially those that have young ones, (which they carry in their arms as women do their children) venture to approach the baskets, and as they are about to thrust their heads in to eat, the males on the one side advance to hinder them. Immediately the other party comes forward, and the feud being kindled on both sides, the combatants seize the cudgels and commence a most severe fight, which always ends with the weakest being driven into the woods with broken heads and limbs. The victors, he tells us, then fall to in peace, and devour the reward of their labour.

He also informs us, that as he was himself travelling in the East Indies, in company with the English president, a great number of large apes were observed upon the trees around them. The president was so much amused, that he ordered his carriage to stop, and desired Tavernier to shoot one of them. The attendants, who were principally natives, and well acquainted with the manners of these animals, begged him to desist, lest those that escaped might do them some injury in revenge for the death of a companion. Being, however, still requested, he killed a female, which fell among the branches, letting her little ones, that clung to her neck, fall to the ground. In an instant all the remaining apes, to the number of sixty or upwards, descended in fury, and, as many as could leaped upon the president's coach, where they would soon have strangled him, had

not the blinds been immediately closed, and the number of attendants so great, as, though not without difficulty, to drive them off. They, however, continued to run after and teaze the servants for at least three miles from the place where their companion was slain.

This species of ape agrees well with our climate, and is very common in exhibitions in this country. It walks on four in preference to two legs; and uses the same grimaces to express both anger and appetite. Its movements are brisk, its manners gross; and when agitated by passion, it exhibits and grinds its teeth. Notwithstanding its ferocious and unaccommodating disposition, it is, by perseverance and force of discipline, generally taught to perform a few tricks to amuse the spectators. Some of them will learn to dance, make gesticulations in cadence, and peaceably allow themselves to be clothed.

#### COMMON OR MOTTLED BABOON.

THIS is a species of very considerable size, and when in a sitting posture, is from three to four feet in height. It is extremely strong and muscular in its upper parts, and slender towards the middle; but this is the general shape of all the true baboons: its colour is an uniform greyish brown, paler beneath; the hairs on the upper parts, if narrowly inspected, appear as if mottled; the face is long, and of a tawny flesh colour; the eyes appear as if sunk into the head, or very deeply seated, and are of a hazel colour. The hands and feet have strong blunt claws; but the thumbs of the hands have rounded nails. The tail is very short.

This animal is one of the most formidable of the savage race in those countries where it is





COMMON RABOON.



bred. It appears, in its native woods, to be impelled by two opposite passions; a hatred for the males of the human species, and a desire for women. Were we assured of these strange oppositions in its disposition from one testimony alone, the account might appear doubtful; but, as it comes from a variety of the most credible witnesses, we cannot refuse our assent. From them, therefore, we learn, that these animals will often assail women in a body, and force them into the wood, where they keep them against their will, and kill them when refractory.

At the cape of Good Hope they are less formidable, but, to the best of their power, equally mischievous. They are there under a sort of natural discipline, and go about whatever they undertake with surprising skill and regularity. When they set about robbing an orchard or a vineyard, for they are extremely fond of grapes, apples, and ripe fruit, they do not go singly to work, but in large companies, and with preconcerted deliberation. On these occasions, a part of them enter the inclosure, while one is set to watch. The rest stand without the fence, and form a line reaching all the way from their fellows within, to their rendezvous without, which is generally in some craggy mountain. Every thing thus disposed, the plunderers within the orchard throw the fruit to those that are without as fast as they can gather it; or, if the wall or hedge be high, to those that sit on the top; and these hand the plunder to those next them on the other side. Thus the fruit is pitched from one to another all along the line, till it is safely deposited at their head quarters. They catch it as readily as the most skilful tennis-player can a ball; and while the business is going forward, which they conduct with great expedition, a

most profound silence is observed among them. Their centinel, during this whole time, continues upon the watch, extremely anxious and attentive ; but, if he perceives any one coming, he instantly sets up a loud cry, and at this signal the whole company scamper off. Nor yet are they at any time willing to leave the place empty handed ; for if they be plundering a bed of melons, for instance, they go off with one in their mouths, one in their hands, and one under their arm. If the pursuit is hot, they drop first that from under their arm, and then that from their hand ; and, if it be continued, they at last let fall that which they had hitherto kept in their mouths.

GREAT BABOON, VARIEGATED BABOON, OR MANTEGAR.

THIS animal, when erect, is from three to five feet in height, excessively fierce, libidinous, and strong. It is the most remarkable of the whole tribe for brilliancy and variety of colour. Its eyes are of a hazel colour ; its ears small and naked ; its face like that of a dog, but very thick ; the middle of the face and forehead naked, of a bright vermilion colour ; the tip of the nose of the same colour, but truncated like that of a hog ; the sides of the nose broadly ribbed, and of a fine violet hue ; the opening of the mouth very small ; its cheeks, throat, and goat-like beard, yellow : the hair on its forehead is long and black, and turns back like a toupee. The rest of the head, the arms and legs, are covered with short hair, yellow and black intermixed ; the breast with long whitish yellow hairs ; the shoulders with long brown hair : the hairs of the belly of an ash colour, speckled like the sides of a partridge.



VARIEGATED BABOON.





PL-5



MAIMON.



Its nails are flat ; its feet and hands of a dusky colour. Its tail stands erect, and is very hairy, from four to six or seven inches in length. The rump of a vermilion colour ; and the beautiful colours on the hips are gradations from red to blue ; the inside of the thighs a light blue. This is a native of the interior of Africa.

MANDRILL MAIMON, OR RIBBED NOSE BABOON.

THIS baboon has a long naked nose, of a flesh colour, compressed sideways, ribbed obliquely on each side, and striped with blue ; on the chin a short, picked, orange beard : its tail, which is between two and three inches long, and very hairy, it carries erect ; its buttocks are bare ; its hair is soft and long, of a reddish brown upon the body, and grey upon the breast and belly. It has cheek pouches ; its ears, the palms of its hands, and the soles of its feet, are naked.

The ugliness of this baboon is perfectly disgusting. From his nostrils distils perpetually a kind of mucus, which, with his tongue, he licks into his mouth. His body is of a squat figure ; his buttocks are of a blood colour. The deep longitudinal wrinkles or ribs, on each side of his nose, augment the sullenness and deformity of his aspect.

They differ as to size ; some are only two feet long from the nose to the tail ; others four, or even five. They are more tractable, and less impudent than the great baboon, but equally disagreeable. They are found on the Gold coast, and other southern provinces of Africa.

**WOOD BABOON.**

THIS baboon has a long dog-like face, of a glossy black. His hands and feet are black, and naked, like the face. His nails are white. His body is covered on all parts with long hair, elegantly mottled with black and greyish brown. His tail measures not quite three inches ; it is very hairy on the upper part.

When erect, he is about three feet high. He inhabits Guinea, and is called by the English, The man of the wood.

**YELLOW BABOON.**

THIS creature greatly resembles the wood baboon, but differs in the following instances : its ears are hid in its fur ; there are several long dusky hairs over its eyes ; its hands are covered with hair above ; its colour is a bright yellow, mottled with black. It is about two feet long, and is probably a native of Africa.

**CINEREOUS OR ASH-COLOURED BABOON.**

THIS baboon is distinguished by his dusky face, pale brown beard, and his crown mottled with yellow. His body and limbs are of a cinereous brown. It is about the size of the former.

**BLUE-FACED, TUFTED, OR BROAD-TOOTHED  
BABOON.**

THIS animal has a bluish face ; two very flat and broad fore teeth ; a pale brown beard ; long hairs over each eye ; and a tuft of hair behind each ear. The hair of his body is black, and

## BROWN, LITTLE, AND CRESTED BABOON. 21

cinereous, mixed with a dull rust colour. Its length is about three feet.

The four last species were described from specimens in the collection of sir Ashton Lever.

### BROWN BABOON.

THIS species has pointed ears, and a face of a dirty white. Its nose is large and broad. The colour of the upper part of its body is brown; of the under an ash colour. Its tail is taper, almost bare of hair, and about four inches long. Its legs are much longer in proportion to the size of its body, than those of the great, or ribbed nose baboon. It is more frequently to be seen in the exhibitions of wild beasts.

### LITTLE BABOON.

THE head and ears of this species are roundish; the mouth projects; the thumb is not remote from the fingers, as in the former kinds; the nails are narrow and compressed; those of the thumb are rounded. The colour of its hair yellowish, tipped with black. Its face is brown, with a few scattered hairs; its tail not an inch long; its buttocks are covered with hair. It is about the size of a squirrel; an inhabitant of India, and a lively creature.

### CRESTED BABOON.

THIS animal derives its name from the very long and dishevelled hair, of a dusky colour, on its crown and cheeks. Its breast is whitish; the rest of the body and its limbs are covered with long black hair. Its face and feet are black and bare. Its tail slender and taper, about seven

inches long. The whole length of the animal is about two feet. It inhabits Africa.

#### PIGTAIL BABOON.

THIS species is easily distinguished by its tail, which is four inches long, slender, and exactly like a pig's. Its face is of a swarthy redness, and somewhat pointed. It has ears like those of the human body; its eyes are of a hazel colour. It has two sharp canine teeth; the crown of the head dusky; the hair on the limbs and body brown, inclining to an ash colour, but palest on the belly. Its fingers are black; its nails long and flat. The thumbs on its hind feet are very long, and connected to the nearest toe by a broad membrane. Its length from head to tail is twenty-two inches. Though full of vivacity, it has none of that impudent petulance peculiar to the other baboons; but is gentle, tractable, and even caressing. It is found in Sumatra and Japan. In the latter country, it is taught tricks and carried about by mountebanks.

#### BABOONS WITH LONGER TAILS.

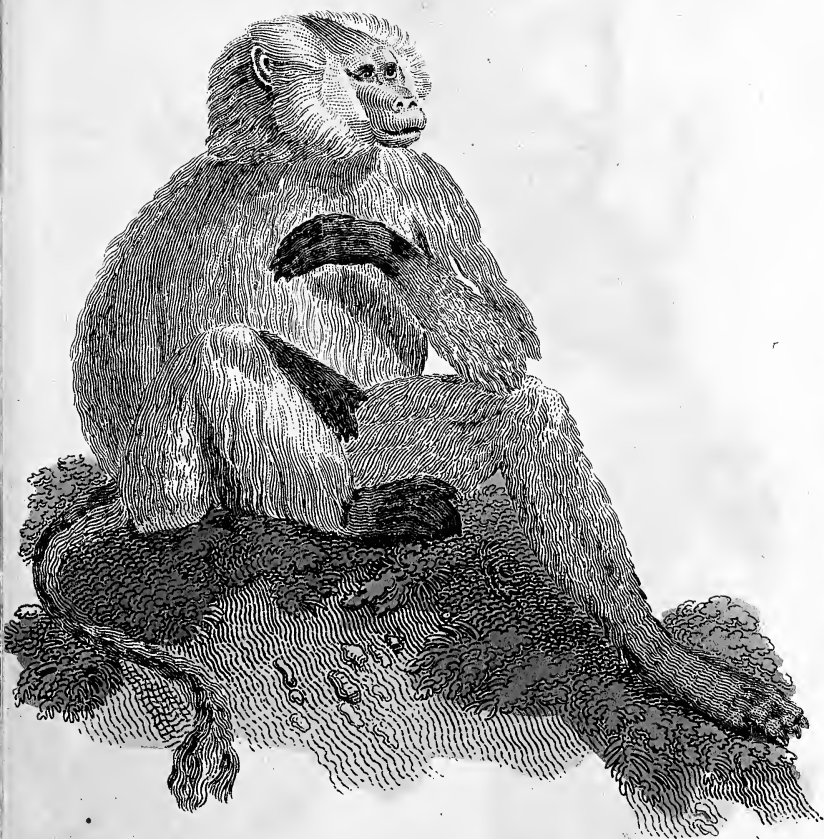
##### DOG-FACED BABOON.

THIS species has a long, thick, and strong nose, covered with a smooth red skin. Its eyes are small, and deeply seated; its ears pointed and hid in its hair. Its head is large and flat. The hair on the sides of its head and the fore part of its body, as far as the waist, is very long; and



FIG TAILED BABOON.





DOG-FACED BABOON





the hind part of the head, on the limbs and hind part of the body, very short. Its limbs are strong and thick ; its hands and feet dusky. The nails on the fore feet are flat ; those on the hind resemble claws. Its buttocks are very bare, and covered with a skin of a bloody colour. Its tail, which is scarcely the length of the body, is carried generally erect.

The baboons of this species, in vast troops, inhabit the hottest regions of Africa and Asia. They are very fierce ; excessively impudent, indecent, and lascivious. They rob gardens ; and are dangerous to people passing the place where they happen to be. When they dare not attack passengers, they run up trees, shake the boughs at them with great fury, and chatter very loud. In Arabia Felix they infest the woods by hundreds, and oblige the owners of the coffee plantations to be continually on their guard against their depredations. They are quite untameable. Some of them are above five feet high.

#### URSINE OR BEAR BABOON

SEEMS to be a variety of the same species. It is covered with long dusky hair, and has, at first sight, the appearance of a young bear ; and hence it has its name. It has a great head, a long and thick nose, and short ears. The crown of its head is covered with long upright hairs. The part of the head immediately above the forehead is prominent, and terminates in a ridge. Its body is thick and strong ; its limbs are short ; its tail measures half the length of the body, and is arched at the end. Its nails are flat and round ; its buttocks of a bloody redness. Even when sitting, it measures four feet in height ; and when erect, is as high as a middle sized man. They are very nu-

merous near the Cape of Good Hope, and go in troops among the mountains.

When they discover any single person resting and regaling himself in the fields, if great care is not taken, they will cunningly steal up behind, snatch away whatever they can lay hold of, then running to a little distance, will turn round, seat themselves on their posteriors, and with the most arch grimaces imaginable, devour it before the man's face. They frequently hold it out in their paws, as if to offer it back again, and then use such ridiculous gestures, that, although the poor fellow loses his dinner, he seldom can refrain from laughing.

They are indeed so numerous among the mountains, as, at times, to render it exceedingly dangerous for travellers to pass them. They sit undismayed on the tops of the rocks, and not only roll, but even throw from thence stones of immense size. A gun, in these cases, is generally of indispensable use, in driving them to such a distance that the stones they throw may do no material injury. In their flight, even with their cubs on their backs, they often make most astonishing leaps up perpendicular rocks. And their agility is so great as to render them very difficult to be killed, even with fire-arms.

#### LION-TAILED OR LONG-TAILED BABOON.

THE tail of this animal, terminated with a tuft of hair like that of a lion, has procured it the name here given it. It has a long dog-like face, of a dusky colour; a very large and white or hoary beard, (which surrounds the face to a considerable distance) and large canine teeth; its nails are flat; its body is covered with black hair; its belly is of a lighter colour; it is about

the size of a middling sized dog, and inhabits the East Indies and the hotter parts of Africa.

There was one shewn in London some years ago, excessively fierce and ill-natured.

The negroes set a great value on the skins of this species, and sell them to one another at eighteen or twenty shillings each. Of these skins they make the caps for the tie-ties or public criers. Thus human ingenuity has found one use they can serve.

### DOG-TAILED BABOON.

THIS animal is described by Scopoli, who informs us that it was about the size of a middling dog; being nearly two feet from nose to tail: it had cheek-pouches, and bare spaces behind, though in the figure accompanying his description this particular does not appear. The face appears uncommonly mild and placid. It was very fond of snuff, which it would also occasionally rub over its body in a ridiculous style.

### WRINKLED BABOON.

THIS species seems extremely allied to the preceding animal: it has also a great affinity to the pig-tailed baboon. It was fifteen inches long; the nose flattish, with a sort of sinking on the upper part, owing to the projection of the os frontis; the iris of the eye yellowish; the ears round, and of a flesh colour, having a small scollop or insection on the back part, so as to appear different from the hare-lipped monkey, to which, except in having a short tail, it is also allied: its face is flesh coloured; the callosities behind, and the neighbouring space of a blood-red, and marked with strong wrinkles. The up-

per part of the body was of a yellowish green tinge, mixed with a little grey. The outsides of the limbs grey also. The under parts of the body and limbs, whitish. The tail was seven inches and two lines long, and of a grey colour.

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## MONKEYS.

IN general, monkeys of all kinds, being less than the baboon, are endued with less powers of doing mischief. The ferocity of their nature seems to diminish with their size ; and when taken wild in the woods, they are sooner tamed, and more easily taught to imitate man than the former. More gentle than the baboon, and less grave and sullen than the ape, they soon begin to exert all their sportive mimicries, and are easily restrained by correction. But it must be confessed that they will do nothing they are desired without beating ; for, if their fears be entirely removed, they are the most insolent and headstrong animals in nature.

In their native woods they are not less the pests of man than of other animals. The monkeys, says a traveller, are in possession of every forest where they reside, and may be considered as the masters of the place. Neither the tiger, nor the lion itself, will venture to dispute the dominion, since these, from the tops of trees, continually carry on an offensive war, and by their agility escape all possibility of pursuit. Nor have the birds less to fear from their continual depredations ; for the monkeys are for ever on the watch to find out and rob their nests ; and such is their petulant delight in mischief, that they will fling their eggs against the ground when they want appetite or inclination to devour them.

There is but one animal in all the forest that ventures to oppose the monkey, and that is the serpent. The larger snakes are often seen winding up the trees where the monkeys reside ; and, when they happen to surprise them sleeping, swallow them whole before the little animals have time to make a defence. In this manner, the two most mischievous kinds in all nature keep the whole forest between them ; and are for ever employed in mutual hostilities. The monkeys, in general, inhabit the tops of the trees, and the serpents cling to the branches nearer the bottom ; and in this manner they are usually seen near each other, like enemies in the same field of battle. Some travellers, indeed, have supposed that their vicinity rather argued their mutual friendship, and that they united in this manner to form an offensive league against all the rest of animated nature. " I have seen these monkeys," says Labat, " playing their gambols upon those very branches on which the snakes were reposing, and jumping over them without receiving any injury, although the serpents of that country were naturally vindictive, and always ready to bite whatever disturbed them." These gambols, however, were probably nothing more than the insults of an enemy that was conscious of its own safety ; and the monkeys might have provoked the snake in the same manner as we often see sparrows twitter at a cat. However this be, the forest is generally divided between them ; and these woods, which nature seems to have embellished with her richest magnificence, rather inspire terror than delight, and chiefly serve as retreats for mischief and malignity.

The enmity of these animals to mankind, is partly ridiculous, and partly formidable. They seem, says Le Comte, and others, to have a peculiar instinct in discovering their foes ; and are perfect-

ly skilled, when attacked, in mutually defending and assisting each other. When a traveller enters among these woods, they consider him as an invader upon their dominions, and join all to repel the intrusion. At first they survey him with a kind of insolent curiosity. They jump from branch to branch, pursue him as he goes along, and make a loud chattering, to call the rest of their companions together. They then begin their hostilities by grinning, threatening, and flinging down the withered branches at him, which they break from the trees: they even take their excrements in their hands, and throw them at his head. Thus they attend him wherever he goes; jumping from tree to tree with such amazing swiftness, that the eye can scarce attend their motions. Although they take the most desperate leaps, yet they are seldom seen to come to the ground, for they easily fasten upon the branches that break their fall, and stick, either by their hands or feet, wherever they touch. If one of them happens to be wounded, the rest assemble round, and clap their fingers into the wound, as if they were desirous of sounding its depth. If the blood flows in any quantity, some of them keep it shut up, while others get leaves which they chew, and thrust into the opening: however extraordinary this may appear, it is asserted to be often seen, and to be strictly true. In this manner they wage a petulant, unequal war; and are often killed in numbers before they think proper to make a retreat. This they effect with the same precipitation with which they at first come together. In this retreat the young are seen clinging to the back of the female, with which she jumps away, seemingly unembarrassed by the burden.

The curiosity of the Europeans has, in some measure, induced the natives of the places where

these animals reside, to take them alive by every art they are able. The usual way, in such case, is to shoot the female as she carries her young, and then both, of course, tumble to the ground. But even this is not easily performed; for if the animal be not killed outright, it will not fall; but clinging to some branch, continues, even when dead, its former grasp, and remains on the tree where it was shot, until it drops off by putrefaction: in this manner it is totally lost to the pursuer; for to attempt climbing the tree, to bring either it or the young one down, would probably be fatal, from the number of serpents that are hid among the branches. For this reason the sportsman always takes care to aim at the head; which, if he hits, the monkey falls directly to the ground; and the young one comes down at the same time, clinging to its dead parent.

The Europeans along the coasts of Guinea, often go into the woods to shoot monkeys; and nothing pleases the negroes more than to see these animals drop, against which they have the greatest animosity. They consider them, and not without reason, as the most mischievous and tormenting creatures in the world; and are happy to see their numbers destroyed, upon a double account; as well because they dread their devastations, as because they love their flesh. The monkey, which is always skinned before it is eaten, when served up at a negro feast, looks so like a child, that an European is shocked at the very sight. The natives, however, who are not so nice, devour it as one of the highest delicacies; and assiduously attend our sportsmen, to profit by the spoil. But what they are chiefly astonished at, is to see our travellers carefully taking the young ones alive, while they leave them the old ones, that are certainly the most fit to be eaten. They cannot com-

prehend what advantage can arise to us from educating or keeping a little animal, that, by experience, they know to be equally fraught with tricks and mischief: some of them have even been led to suppose, that, with a kind of perverse affection, we love only creatures of the most mischievous kinds: and having seen us often buy young and tame monkeys, they have taken equal care to bring rats to our factors, offering them for sale, and greatly disappointed at finding no purchase for so hopeful a commodity.

These animals do incredible damage, when they come in companies to lay waste a field of Indian corn or rice, or a plantation of sugar-canes. They carry off as much as they are able; and they destroy ten times more than they bear away. Their manner of plundering is pretty much like that of the baboons, already mentioned, in a garden. One of them stands centinel upon a tree, while the rest are plundering, cautiously turning on every side, but particularly to that on which there is the greatest danger: in the mean time, the rest of the spoilers pursue their work with great silence and assiduity; they are not contented with the first blade of corn, or the first cane that they happen to lay their hands on: they first pull up that which appears most alluring to the eye; they turn it round, examine, compare it with others, and if they find it to their mind, stick it under one of their shoulders. When in this manner they have got their load, they begin to think of retreating: but if it should happen that the owners of the field appear to interrupt their depredations, their faithful centinel instantly gives notice, by crying out, *Houp, houp, houp*; which the rest perfectly understand, and all at once throwing down the corn they hold in their left hands, scamper off upon three legs, carrying the remainder in the



right. If they are still hotly pursued, they then are content to throw down their whole burden, and to take refuge among their woods, on the top of which they remain in perfect security.

The monkey generally brings forth one at a time, and sometimes two. They are rarely found to breed when brought over into Europe; but those that do, exhibit a very striking picture of parental affection. The male and female are never tired of fondling their young one. They instruct it with no little assiduity; and often severely correct it, if stubborn, or disinclined to profit by their example: they hand it from one to the other; and when the male has done showing his regard, the female takes her turn. When wild in the woods, the female, if she happens to have two, carries one on her back, and the other in her arms: that on her back clings very closely, clasping its hands round her neck, and its feet about her middle; when she wants to suckle it, she then alters her position; and that which has been fed gives place to the other, which she takes in her arms. It often happens that she is unable to leap from one tree to another, when thus loaden, and upon such occasions their dexterity is very surprising. The whole family form a kind of chain, locking tail in tail, or hand in hand, and one of them holding the branch above, the rest swing down, balancing to and fro, like a pendulum, until the undermost is enabled to catch hold of the lower branches of some neighbouring tree. When the hold is fixed below, the monkey lets go that which was above, and thus comes undermost in turn; but, creeping up along the chain, attains the next branches, like the rest; and thus they all take possession of the tree, without ever coming to the ground.

## LEONINE MONKEY.

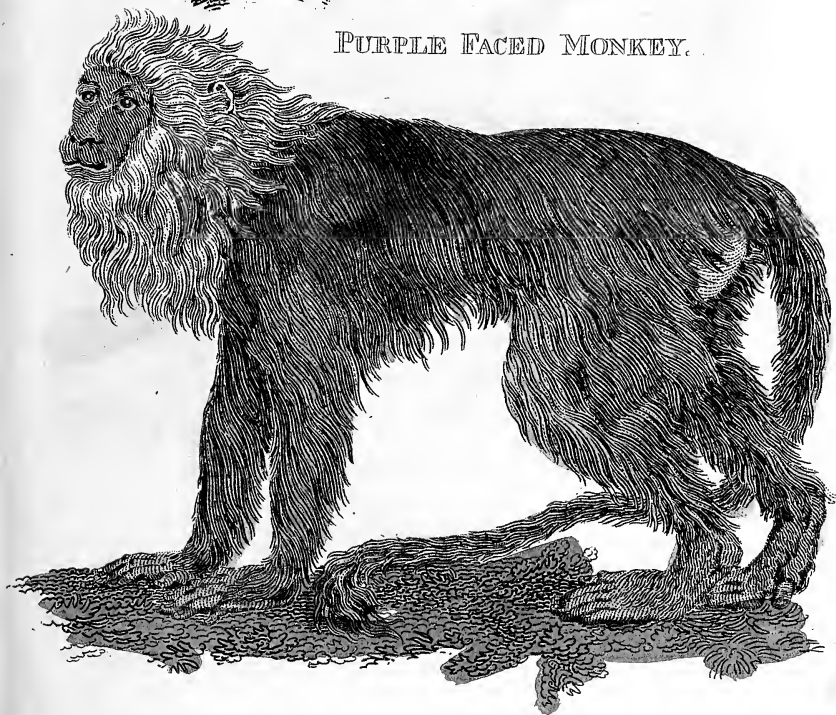
THIS species was described from the living animal in the possession of the Duc de Bouillon, and was in the royal menagerie at Versailles, in the year 1775. Its length was two feet from nose to tail, and it was eighteen inches high when standing on all fours. The legs were long in proportion to the body: the face naked and quite black; the whole body and limbs of the same colour; the hair, though long, appearing short, on account of its lying smooth: around the face, according to Buffon's figure, is a fine long chevelure of grey brown hair, and a large beard of fair grey. The chevelure, or spreading hair round the face, stretches upwards over the eyes and forehead so as to encircle the whole head in a remarkable manner; as in the ovanderon or lion-tailed baboon; to which, indeed, from the figure as well as description, it appears so extremely similar, that it might well pass for a variety of that animal. The eyes are of a deep brown; the nose flat, and the nostrils large and separated like those of the ovanderon; from which, however it differs in the far superior length of the tail, which measures twenty-seven inches, and is tufted at the end. It has callosities behind: the feet and hands are a little hairy, but the fingers are naked; the ears also are naked, flat, round, and hid by the hair. It was supposed to be a native of Abyssinia.

## PURPLE-FACED MONKEY.

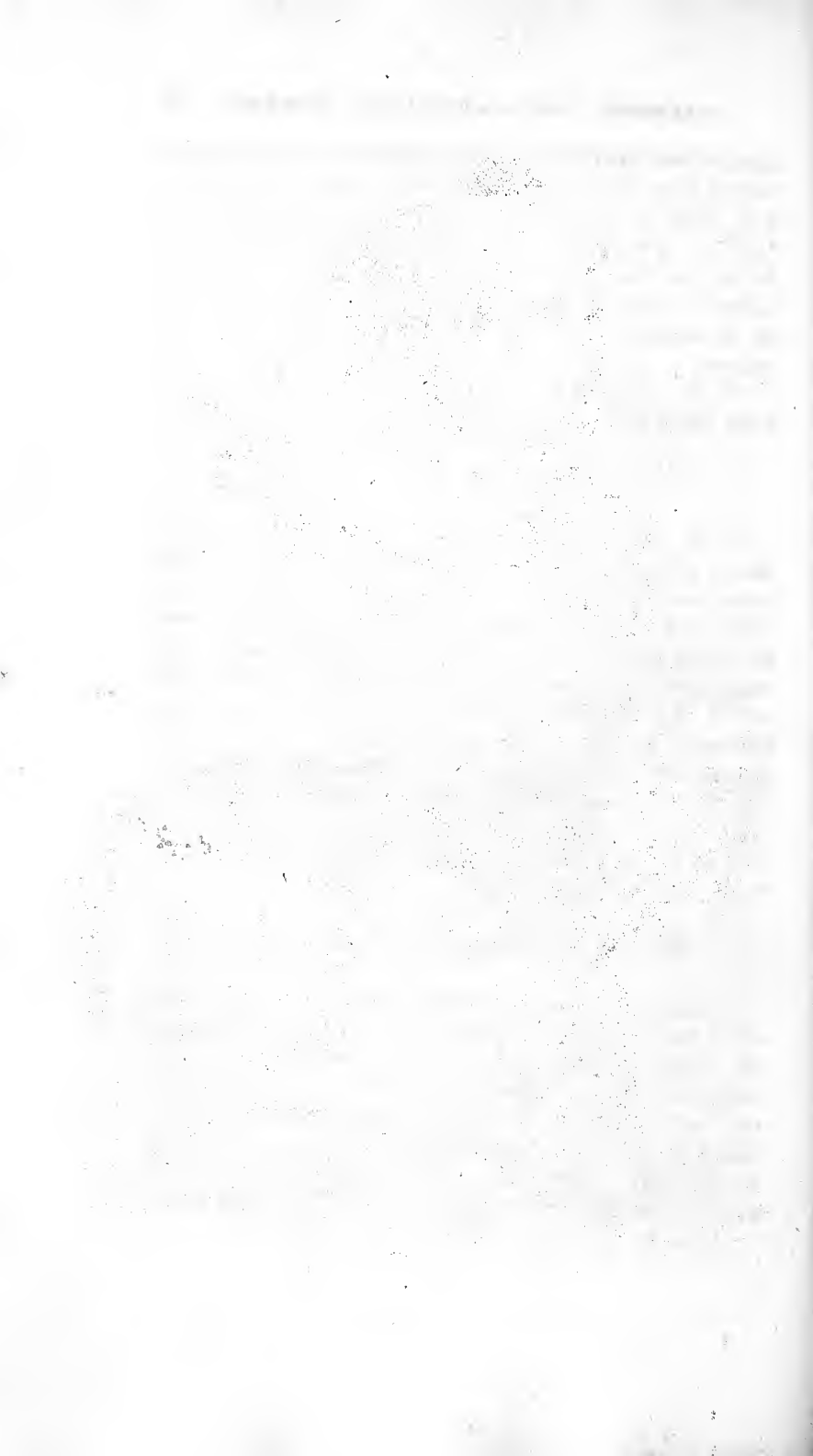
THIS monkey has a large triangular white beard, short and pointed at the bottom, and extended on each side of the ears like wings; its face and



PURPLE FACED MONKEY.



LEONINE MONKEY.



hands are purple ; its body black ; and its tail, which is much longer than the body, is terminated with a dirty white tuft. It is a native of Ceylon, is very harmless, lives in the woods, and feeds on the leaves and buds of trees. When taken it soon becomes tame. There is a variety of it entirely white ; but in form exactly like the others.

These are much scarcer, and more dangerous than the black ones.

#### PALATINE MONKEY, OR ROLOWAY.

THIS monkey has a triangular black face, bordered all round with white hairs ; which, on the chin, are divided into a long forked beard ; its back is of a dusky colour ; its head, its sides, and the outsides of its arms and thighs the same ; but each hair is tipped with white ; the breast, the belly, and the limbs, are white in those which are shewn in Europe, but, in their native country, of an orange colour, for they fade in colder climates ; its tail and body are each about a foot and a half long. In Guinea, its native country, it is very full of frolic ; fond of the persons it is acquainted with, but averse to others.

#### HARE-LIPPED MONKEY, OR MACAQUE.

THIS species has its nostrils divided like those of a hare ; its nose is thick, flat, and wrinkled ; its head is large, eyes small, teeth very white, body thick and clumsy ; its buttocks are naked ; its tail is long ; its colour varies ; it is sometimes of an olive brown, and sometimes of a grey brown ; the belly and the inside of the limbs are of a light ash colour. It is a native of Gui-

nea and Angola, and is full of frolic and ridiculous grimace.

#### SPOTTED MONKEY, OR DIANA.

THE spotted monkey is a species of a middle size ; it has a long white beard ; the upper parts of its body are reddish, as if they had been singed, and are marked with white specks ; the belly and chin are whitish, and the tail very long. Linnaeus describes his Diana monkey somewhat differently. He says, it is of the size of a large cat, black, spotted with white ; that the hind part of the back is ferruginous ; its face black, and its beard pointed, black above and white beneath, placed on a fattish excrescence ; that its breast and throat are white ; that a white line passes from the nose over each eye in an arched form to the ears ; that there is a white line passing from the rump cross the thighs ; that the tail is long, straight, and black ; that the ears and feet are of the same colour ; and that it has large canine teeth. It inhabits Guinea and Congo.

#### LONG-NOSED MONKEY.

THIS monkey has a very long slender nose, covered with a flesh-coloured, naked, skin ; the hair on its head falls back ; that on its body and breast is long ; the colour of the head and upper part of the body and limbs is pale ferruginous, mixed with black ; that of the breast and belly light ash ; its tail is very long ; the height of the animal, when sitting, is about two feet ; its face is very much like that of a long nosed dog ; it is very good natured. Pennant, who describes it, is uncertain as to its country ; but thinks it is

probably from Africa. He also mentions another animal, which he calls the prude, and which he thinks may possibly be related to the former.

#### YELLOWISH MONKEY.

THIS creature is of the size of a fox, has a black face, large black naked ears, and large canine teeth ; on the side of the cheeks, long hairs of a pale yellow, falling backward towards the head ; long hairs above each eye ; the throat and breast of a yellowish white, and its upper parts cinereous mixed with yellow ; on the lower parts, and on the tail, the cinereous or ash colour predominates ; the hair on the body is coarse ; the tail is as long as the body.

#### GREEN MONKEY, OR CALLETRIX.

THIS monkey has a red flattish face, and a black nose ; the sides of its face are bounded by long pale yellow hairs, falling backwards like a mustache, and almost covering its ears, which are black, and shaped like those of the human face ; the head, limbs, upper part of the body, and tail, are covered with soft hairs of a yellowish green colour at their ends, of an ash colour at the roots ; the under side of the body and tail, and the inner side of the limbs, are of a silvery grey ; the tail is very long and slender ; the size of this monkey is equal to that of a small cat.

Monkeys of this species inhabit different parts of Africa ; they keep in great flocks, and live on trees in the woods, where they are almost entirely concealed by the leaves, and would scarce be noticed, were it not for the branches which they break in their gambols ; though in these they

### 36 WHITE-EYE-LID, AND MUSTACHE MONKEY.

are very agile and silent ; even when shot at, they do not make the least noise ; but will unite in company, knit their brows, and gnash their teeth, as if they meant to attack the enemy. They are very common in the Cape de Verd islands.

#### WHITE-EYE-LID MONKEY.

THIS species has a long, black, naked, and dog-like face ; the upper part of the eye-lids of a pure white, which distinguishes it from most other species ; the ears black, and like those of the human body ; no canine teeth ; hairs on the sides of the face ; those beneath the cheeks longer than the rest ; the colour of the whole body is tawny and black ; the nails on the thumbs and fore fingers are flat ; those on the others are blunt claws ; the tail, which it carries arched, as well as the hands and feet, are black ; it is a native of Madagascar ; there is a variety of it with a white colour.

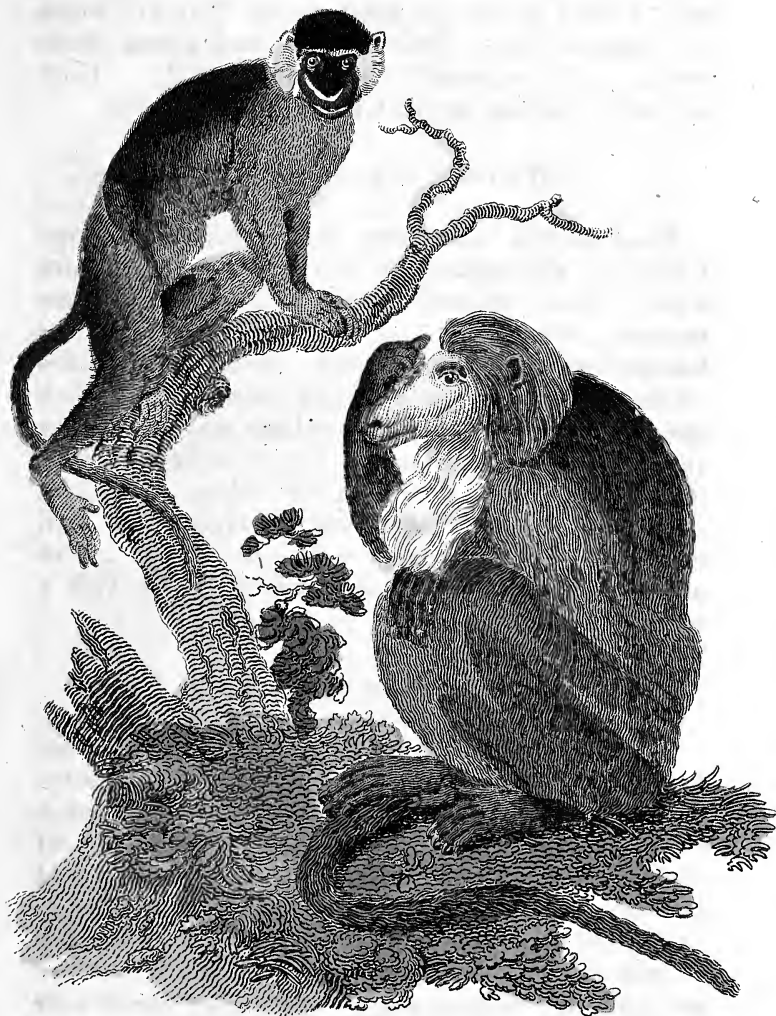
#### MUSTACHE MONKEY.

Two large tufts of yellow hairs, like mustaches, before its ears, serve to distinguish this monkey ; and to give it a name ; it has a short nose, of a dirty bluish colour, and a transverse stripe of white beneath it ; the edges of both its lips, and the space round the eyes, black ; its ears are round, and tufted with whitish hairs ; the hair on the top of the head is long and stands upright ; there are some black hairs round its mouth ; the colour of the hair on the head, yellow mixt with black ; on the body and limbs, a mixture of red and ash colour ; the rest yellowish ; the under part of the body is paler than the upper ; the feet are black,



MUSTACHE MONKEY

PL 9



LONG NOSED MONKEY

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nails flat ; its length is one foot ; that of its tail eighteen inches. It is found in Guinea. Buffon seems to confound it with the following species.

#### WHITE-NOSE MONKEY.

THIS monkey has a black flat face ; the end of its nose is of a snowy whiteness, which distinguishes the species from most others ; the irides of its eyes yellow ; the hair on the head and body is smooth, mottled with black and yellow ; its belly white ; hands black ; tail very long, the upper side black, the lower white ; it inhabits Guinea and Angola. When taken young and tamed, it is very sportive and diverting. In a wild state, it avoids mankind, is very crafty, and has a very bad smell.

#### TALAPOIN.

THIS animal has a sharp nose, a round head, large black naked ears ; the eyes and end of the nose flesh coloured ; the hair on its cheeks is very long, and reflected towards the ears ; on the chin it has a small beard ; the colour of the upper part of the body is a mixture of dusky yellow and green ; the outside of the limbs blackish ; the inside whitish ; the lower part white tinged with yellow ; its tail is very long and slender ; above, of an olive and dusky colour ; beneath, cinereous ; the paws black ; the length of the creature itself, is about one foot ; its tail one foot five inches. It is an inhabitant of India.

### NEGRO MONKEY, OR MIDDLE-SIZED BLACK MONKEY.

THE negro monkey has a round head, a nose rather sharp, a face of a tawny flesh colour, with a few black hairs, having eyes of a reddish hazel ; the hair above the eyes long, uniting with the eye-brows ; that on the temples partly covering the ears ; its breast and belly of a swarthy flesh colour, almost naked ; the hair on the back, limbs, and tail, black, and pretty long ; its paws are covered with a black soft skin, and its tail is longer than the body. It is about the size of a large cat ; is active, lively, entertaining, and good-natured. It is found in Guinea.

### EGRET.

THIS creature has a long face, and an upright sharp-pointed tuft of hair on the top of its head ; the hair on its forehead is black ; the upper part of the body is of an olive, the lower of an ash colour ; its eye-brows are large ; its beard small ; and it is itself of the size of a small cat. Monkeys of this species are found in Java. They are said to fawn on men and their own species, and embrace each other ; and to play with dogs, if they have none of their own species with them. If they see a monkey of another species, they greet him with a thousand grimaces. When a number of them go to sleep, they put their heads together. They make a continual noise during the night.

### MONA, OR MONEA.

THIS species is called by the Malays monea ; it is distinguished by a high, upright, rusty tuft,

on the crown : its limbs and body are ferruginous, mixed with dusky ; its belly and the inside of its legs are whitish.

It is supposed to be a variety of the egret, or to be some other species imperfectly described.

### RED MONKEY.

THE upper part of the body of this monkey, which is slender, is of a beautiful bright bay, almost red, so vivid as to appear painted ; the lower parts are of an ash-colour, tinged with yellow ; the length of the body is about one foot six inches ; the tail generally not so long ; it has a long nose ; its eyes are sunk in the head, and its ears furnished with pretty long hairs ; those on each side of the face are long ; its chin is bearded ; over each eye, a black line, or sometimes a white one, extends from ear to ear.

It inhabits Senegal ; is less active than other monkies, but more inquisitive. When boats are passing along the river, they will come in crowds to the extremities of the branches, and seem to admire them with vast attention ; at length they will become so familiar as to throw pieces of sticks at the crew.

### CHINESE MONKEY.

THIS animal hath a long smooth nose, of a dusky colour ; the hair on the crown of its head is long, lies flat, and is parted like that of a man ; its colour is generally a dusky brown, mixed with yellow ; the belly is whitish. Monkies of this species inhabit, or rather infest Ceylon ; they keep together in great troops, and rob the gardens of fruit, and the fields of corn.

It has the name of Chinese from its hair spread-

ing out in a circular direction like a Chinese cap. It is about the size of a cat.

#### BONNETED MONKEY.

A CIRCULAR bonnet on its crown, consisting of upright black hairs, distinguishes this animal ; it is of the size of a cat, having long hairs on the sides of its cheeks ; its body brown ; its legs and arms black.

#### VARIED MONKEY, OR MONA.

THIS species of the monkey is described as having its nose, the orbits of its eyes, and its mouth, of a dirty flesh colour ; the hair on the sides of its face, and under its throat, is long, of a whitish colour, tinged with yellow ; its forehead, is grey, having a black line, from ear to ear, above the eyes ; the upper part of the body is dusky and tawny ; the breast, belly, and inside of the limbs are white ; the outside of its thighs and arms black ; its hands and feet are black and naked ; its tail of an ash brown ; it is about a foot and a half long, and its tail about two.

It inhabits Barbary, Ethiopia, and other parts of Africa, and is very common. This kind, it is supposed, gives the name of monkey to the whole tribe, from the African word *monne*, or rather from the corruption of it, *monichus* and *monichi*.

#### VAULTING MONKEY.

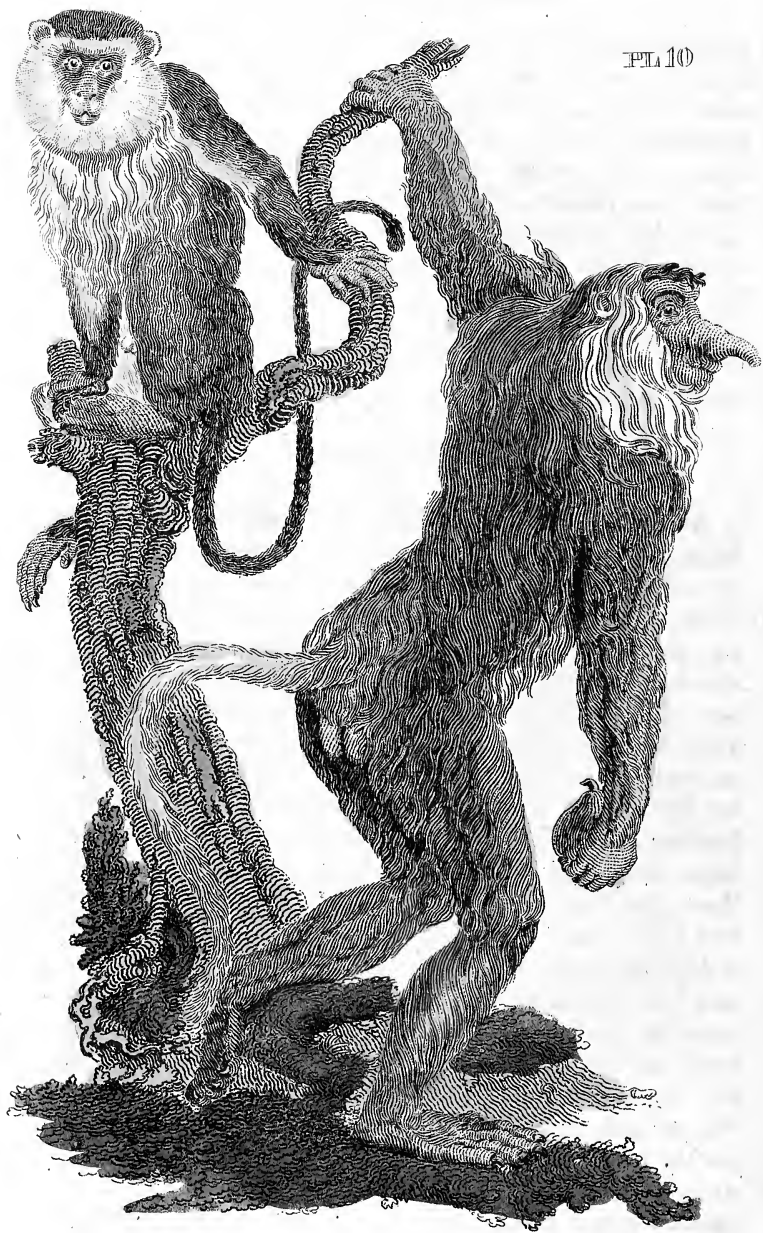
This is described by Mr. Allamand in his edition of Buffon's natural history of quadrupeds.

It is said to be somewhat more than a foot high, and the tail about twenty inches long. The up-



VARIED MONKEY

PL 10



PROBOSCIS MONKEY



per parts of the animal are of a dark olivaceous colour, owing to a mixture of olive green, and black hair; the face black, with a snow-white triangular spot on the nose; the chin, throat, breast, and belly, white; the under part of the tail, and insides of the limbs of blackish grey. It is an extremely nimble and active animal, according to Mr. Allamand. The individual in his possession came from Guinea. It was perfectly familiar, playful, of a gentle disposition, and so rapid in its motions that it seemed to fly rather than leap.

## PROBOSCIS MONKEY.

AMONGST the whole tribe of monkies, this, perhaps, may be considered as the most singular in its aspect; the nose being of such a length and form as to present, especially in a profile view, an appearance the most grotesque imaginable; and indeed, from an inspection of the figure alone, one would be apt to imagine that it must have been designed for a caricature of a monkey. The animal, however, is preserved in the royal cabinet at Paris, and was first described by Mons d'Aubenton. It is a large species, measuring two feet from the tip of the nose to the tail, which is more than two feet long. The face was a kind of curved form, and is of a brown colour, and marked with blue and red: the ears broad, thin, naked, and hid within the hair. The head is large, and covered with chesnut-coloured hair: the whole body is also of a similar colour, except that on the breast it approaches to orange. Round the throat and shoulders the hair is much longer than on the other parts, so as to form a sort of cloak, as in some of the baboons, to which, indeed, this species seems nearly allied. It is an East Indian

animal, and is extremely rare. The form of the nose is most singular, being divided almost into two lobes at the tip ; a longitudinal furrow running along the middle. It is said to be found chiefly in Cochin China, and to grow to a very large size. They are sometimes seen in great companies, and are considered of a ferocious disposition, though they feed only on fruits.

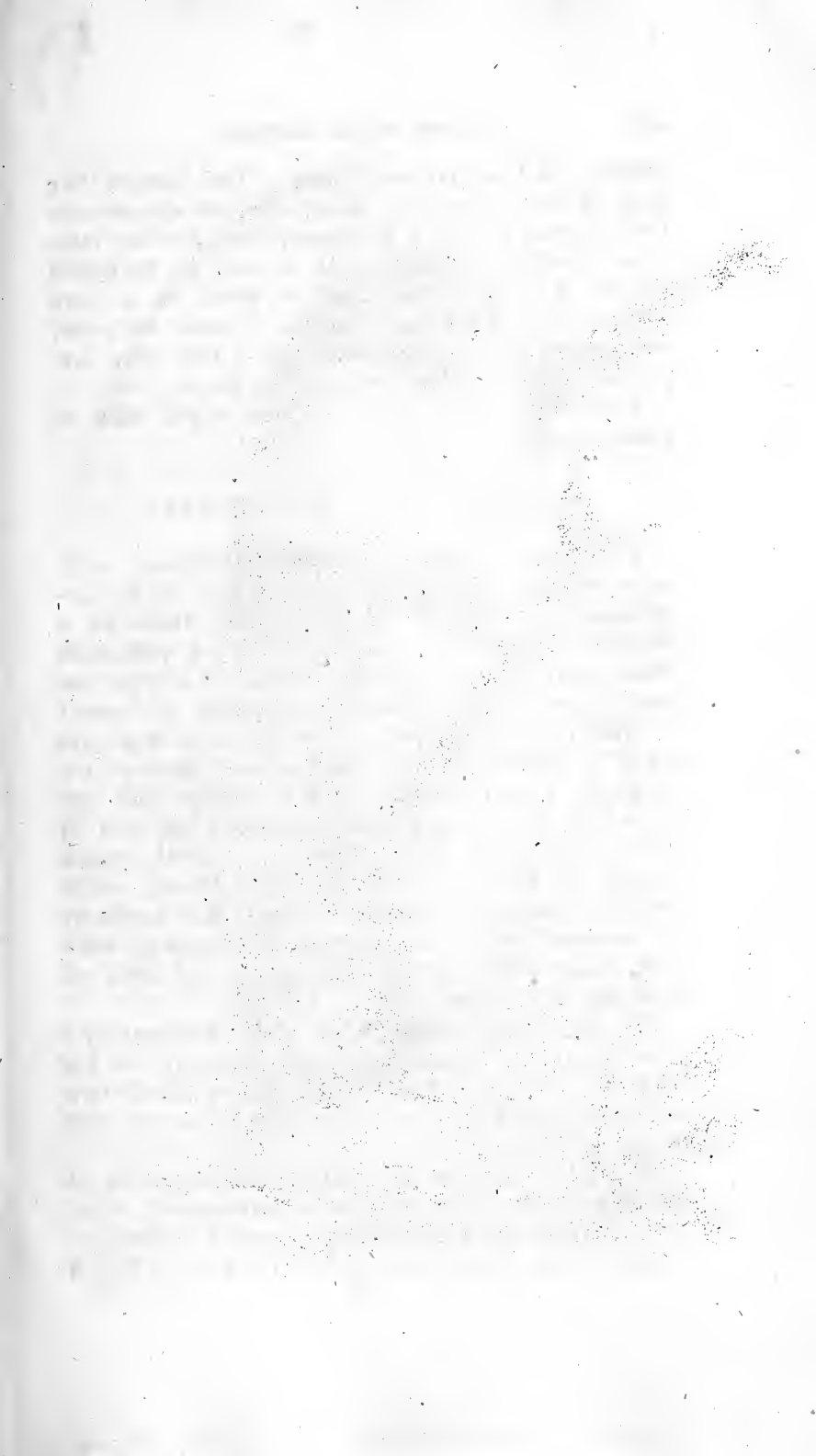
The native name of this animal is *khî dôc*, or great monkey.

#### DOUC, OR COCHIN CHINA MONKEY.

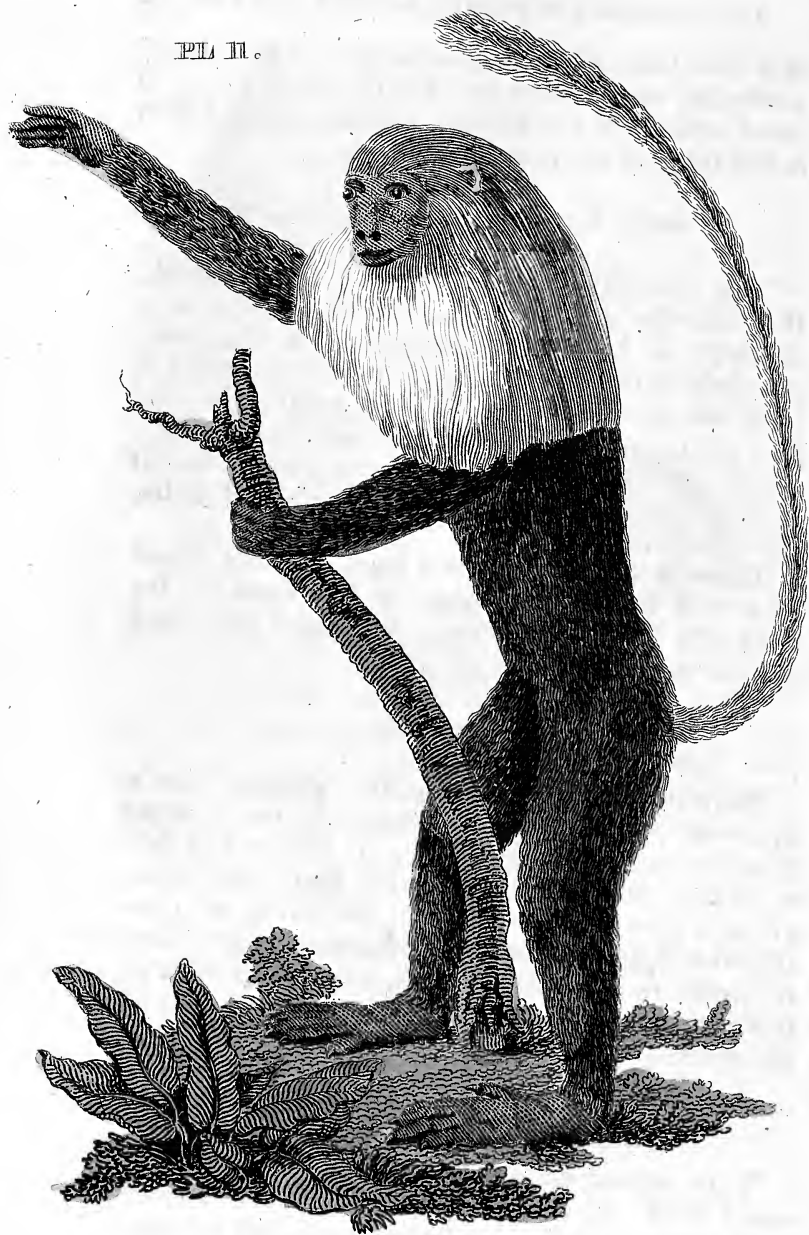
THE robe of this creature, variegated with many colours, distinguishes his species in a conspicuous manner. Round his neck there is a collar of a purplish, brown colour ; a yellowish white beard surrounds his cheeks ; his lips are black, and he has a black ring round his eyes ; his face is short and flat ; both his face and ears are of a yellowish bay ; his head and body grey ; his back, breast, and belly, are yellow ; his legs are white below, and black above ; his tail is white, and there is a large spot of the same colour on his loins ; his feet are black, with several shades of different colours ; his buttocks are covered with hair, which is the case with only three others of all the species of apes of Asia and of Africa.

He inhabits Cochin China and Madagascar ; lives mostly on beans, and frequently walks on his hind feet ; he is a very large species, about two feet long from the nose to the tail ; but his tail is not so long.

Travellers assure us, that in the stomachs of the large apes, in the southern provinces of Asia, bezoar stones are found, of a superior quality to those of the goats and gazelles. It is alleged



PL II.



FULL-BOTTOM MONKEY

that the bezoars of the apes are always round, while the other kinds are of different figures. It much resembles the proboscis monkey, but differs in the form of the face.

#### TAWNY MONKEY, OF MR. PENNANT.

THE face of this species is a little produced; that and the ears are flesh coloured; its nose is flattish; it has long canine teeth in the lower jaw; the hair on the upper part of the body is pale tawny, ash coloured at the roots; the hind part of the back is orange; legs ash, belly white; it is a creature of the size of a cat, and its tail is shorter than its body. It is an inhabitant of India, and is very ill-natured.

There is a variety of this species with a black face, and long black hairs on the cheeks; the body of a dull pale green; the limbs grey, and the tail dusky.

#### GOAT MONKEY.

THIS species, described by Mr. Pennant from a drawing in the British museum, derives its name from its long goat-like beard; its blue naked face is ribbed obliquely; its whole body and limbs are of a deep brown colour; its tail is of considerable length; but the gentleman who describes it, seems to fall short of his usual accuracy in this respect, that he does not ascertain the size of the animal.

#### FULL-BOTTOM MONKEY.

THIS animal has a short, black, naked face, a small head; his head and shoulders are covered with long coarse flowing hairs, like a full bottom-

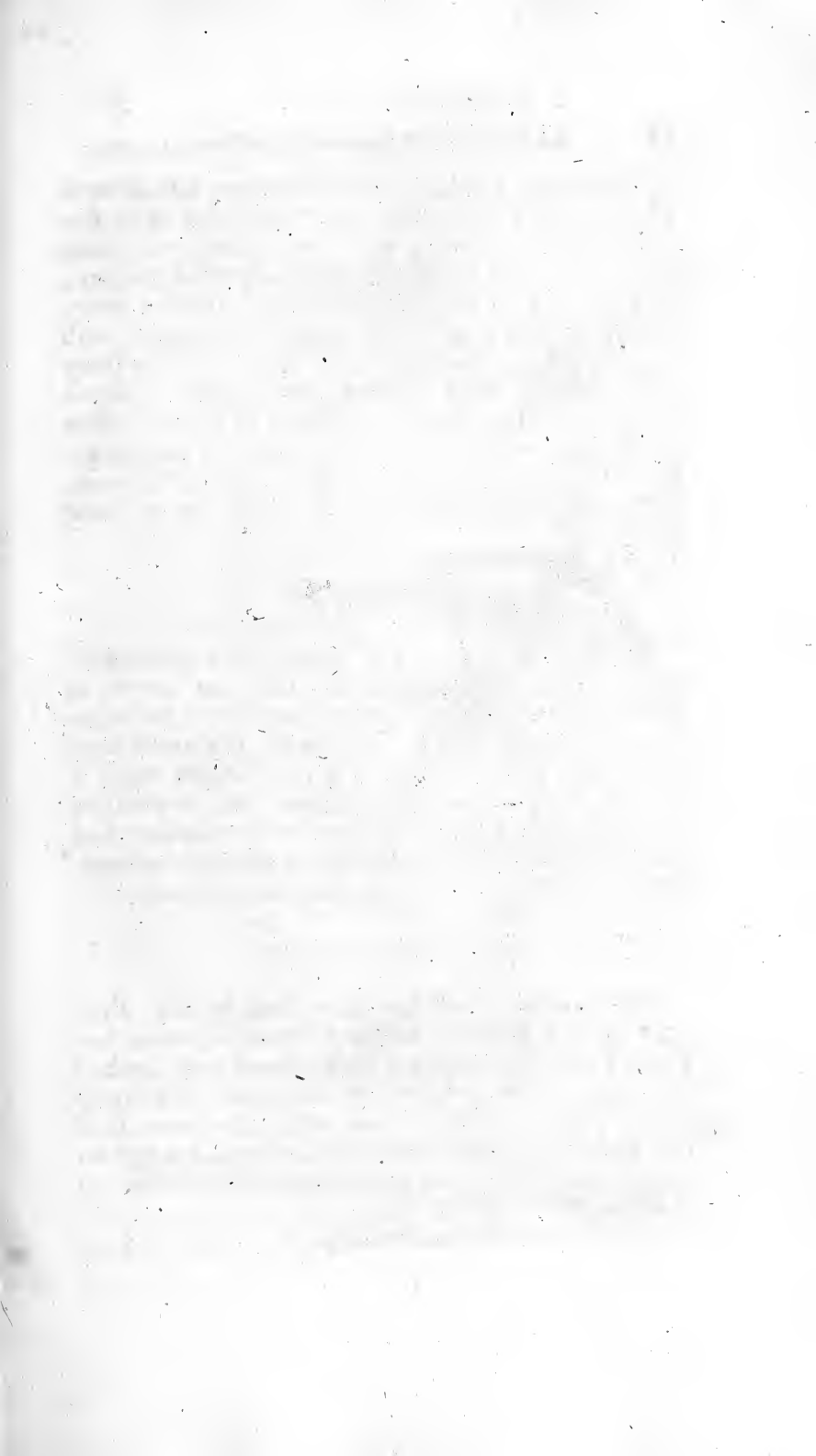
ed perriwig, of a dirty yellow colour, mixed with black; his body, arms, and legs, are of a fine glossy black, covered with short hairs; his hands are naked, and furnished with only four fingers; on each foot he has five very long slender toes; his tail is very long, of a snowy whiteness, with very long hairs forming a tuft at its end; his body and limbs are very slender; his length is above three feet. He inhabits the forest of Sierra Leona in Guinea, where he is called bey, or king monkey. The negroes hold his skin in high estimation, and use it for pouches, and for coverings to their guns.

#### BAY MONKEY.

THIS monkey derives its name, with great propriety, from its prevailing colour; its crown is black; but its back is of a deep bay; the outside of its limbs black; its cheeks, the under part of its body and legs, are of a very bright bay; it has only four fingers on the hands, and on the feet five long toes; its tail is very long, slender, and black; its body and limbs very slender and meagre. Like the last species, it inhabits Sierra Leona.

#### ANNULATED MONKEY.

THIS species of monkey, described by Mr. Pennant, from a drawing in the British museum, has a flat face, long hairs on the forehead and cheeks; the upper part of the body and limbs of a tawny colour; the belly cinereous; the tail shorter than the body, annulated with a darker and a lighter brown, and its hands naked and black; size not mentioned.



FOXTAILED MONKEY

PL 12.



GREAT EARED MONKEY



PHILIPPINE MONKEY.

THIS is an obscure species, said to come from the Philippine islands ; its mouth and eye-brows are beset with long hairs.

FOX-TAILED MONKEY.

THIS species, which inhabits Guiana, is about a foot and a half in length, from nose to tail ; its tail is as long, and like that of a fox ; its face is black, covered with a short white down ; its forehead, and the sides of its face, are covered with pretty long whitish hair ; its body with long dusky brown hair, white or yellowish at the points ; its belly, and the lower part of the limbs, are of a reddish white.

TAMARIN, OR GREAT-EARED MONKEY.

THIS is a beautiful animal, very lively, and easily tamed, but so delicate, that it cannot long resist the inclemency of our climate. It inhabits the hotter parts of South America, and the isle of Gorgona in the South Sea, south of Panama.

It has a round head, a flesh coloured, naked face ; the upper lip a little divided ; ears erect, very large, and almost square ; the hair on the forehead upright and long ; that on the body soft, but shaggy ; the head, body, and limbs black, except the lower part of the back, which is tinged with red ; its hands and feet are covered with orange-coloured hair, very fine and smooth ; its nails are long and crooked ; its teeth very white ; it is of the size of a squirrel ; the tail is black, and twice the length of the body. Its face is sometimes black instead of flesh colour.

Dampier says, at low water they come to the sea-side to take muscles and perriwinkles, which they dig out of the shells with their claws

#### SANGLIN, OR STRIATED MONKEY.

THIS species is of a small size ; its body is only seven inches long ; its tail near eleven ; it weighs only about six ounces, and some not more than four and a half ; it inhabits Brasil, and feeds on vegetables ; but will also eat fish, snails, and insects ; it has but a weak cry, from the sound of which Buffon gives it the name of ouistiti ; it is a very lively, restless, creature, and is often brought over to Europe ; its head is very round ; its ears are like the human ; but are concealed in a front view of the animal, by two very long tufts of white hair standing out on each side ; the irides of its eyes are reddish ; its face is almost naked, of a swarthy flesh colour, with a white spot above its nose ; the head black ; the body ash coloured, reddish, and dusky ; the tail is full of hair, annulated with ash colour, and black, in alternate rings ; its hands and feet are covered with short hair ; its fingers are like those of a squirrel ; its nails, or claws rather, are sharp.

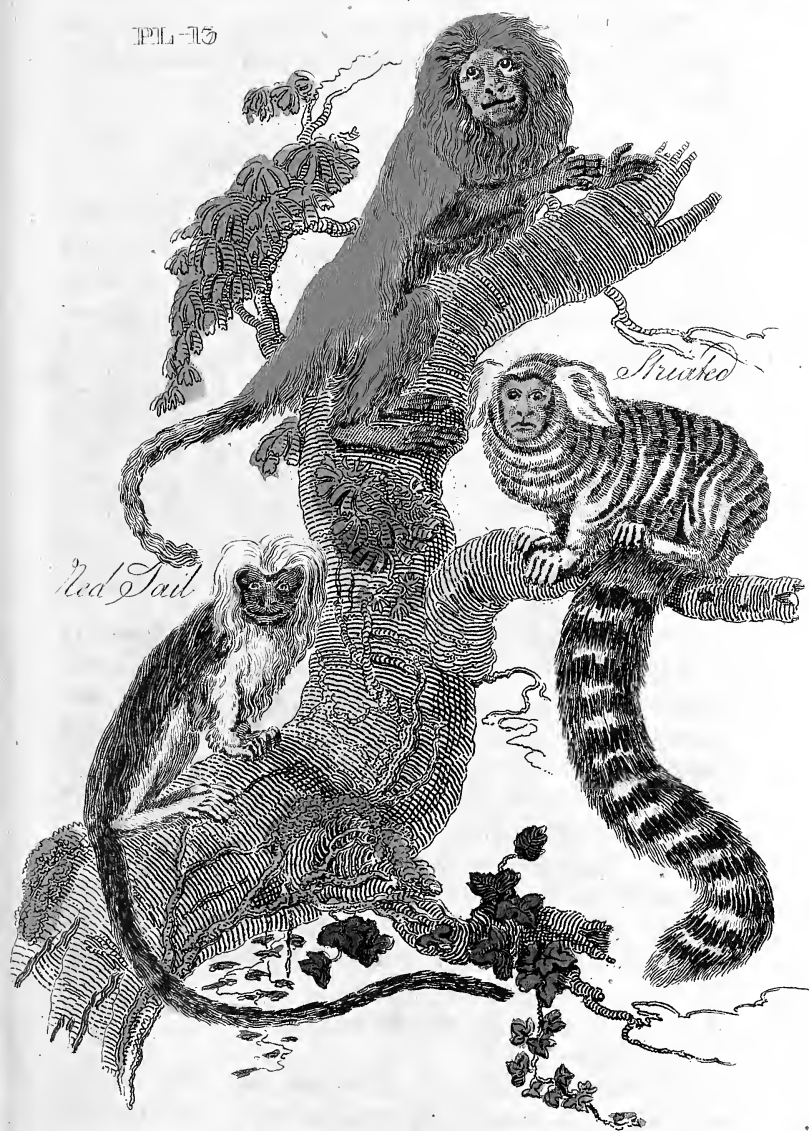
They have produced young in Portugal, where the climate is found favourable to them ; and hence, it has been asserted, that they might be multiplied in the southern parts of Europe.

#### SILKY MONKEY.

THIS species inhabits Guiana, is very lively, and when in a state of confinement, remarkably gentle. The length of its head and body is about ten inches ; its tail thirteen and a half ; a little bushy at the end. Its constitution seems to be

*Pilby Monkey*

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more robust than most of the others, as one of them has been known to live five or six years in France, with the precaution only of keeping it within doors, in a warm room, in winter. The silky softness of its coat has procured it the name here given it; and its colours are not without beauty; its flat face, hands, and feet, are of a dull purple colour; its ears round and naked; on the sides of the face, the hairs are very long, and turned backwards; of a red or bright bay colour, sometimes yellow, and the former colour only in patches; the hair on the body is also long, very fine, glossy, and of a light, but bright yellow; its fingers have claws instead of nails.

#### RED-TAILED, OR LITTLE LION MONKEY.

THIS monkey also inhabits Guiana, Brasil, and the banks of the river of Amazons, whose woods swarm with numberless species. It is agile and lively, and often marches with its tail over its back like a little lion. It has a round head, and a black pointed face; its ears are round, of a dusky colour; on its head it has long white hair spreading over its shoulders; its shoulders and back are covered with long loose reddish brown hair; the rump and half the tail are of a deep orange colour, almost red; the remaining part of the tail, as well as the throat, and insides of the hands and feet, are black; its breast, belly, and legs, are white; its claws are crooked and sharp; the length of the head and body is eight inches; the tail above sixteen. Though its figure and appearance be singular, it is a beautiful animal; its soft voice resembles rather the chanting of a small bird than the cry of a quadruped.

**MICO, OR FAIR MONKEY.**

**THIS** is a rare species, and reckoned the most beautiful of the smaller monkies. Its face and ears are of the most lively vermilion ; its body is covered with long hairs, of a bright and silvery whiteness ; its shape of matchless elegance ; its tail of a shining dark chesnut ; its head and body are eight inches long ; its tail twelve. It inhabits the banks of the river of Amazons, and was discovered by M. de Condamine, who brought one of them almost in sight of the French coast ; but it could no longer bear the inclemency of the climate, to which it then fell a victim.

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**MONKIES WITH PREHENSILE TAILS.**

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**PREACHER, OR BEELZEBUB.**

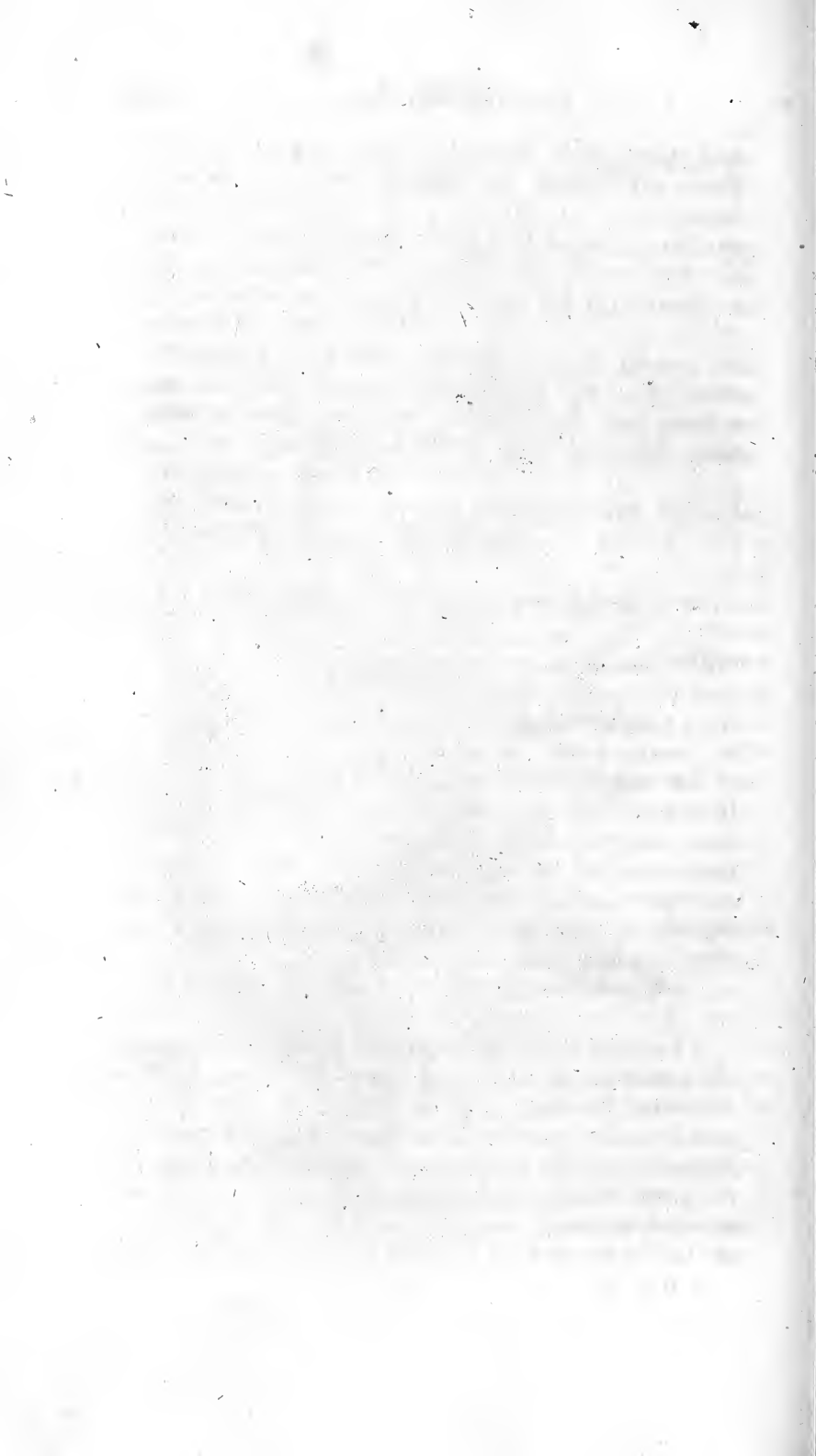
**THE** monkies of this species are as large as a fox ; they have black shining eyes, short round ears, and a round beard under the chin and throat ; the hair on their bodies is of a shining black, long, yet lies so close that the animal appears quite smooth ; the feet and the end of the tail are brown ; the tail is very long, and is always twisted at the end.

Several authors corroborate the evidence of Margrave, a writer of the first authority, and a most able naturalist, who resided long in the Brasils where these creatures abound. He speaks from his own knowledge, and tells us, that morning and evening they assemble in the woods ; that one mounts upon a higher branch, while the rest

PAIR MONKEY



FOUR-FINGERED





seat themselves beneath ; that when he perceives them all seated, he begins, as if it were to harangue, and sets up so loud and sharp a howl as may be heard to a great distance ; the rest keep the most profound silence, till he stops and gives a signal with his hand ; then, in an instant, the whole assembly join in chorus, till he commands silence by another signal, which they obey in a moment ; then the orator resumes his discourse, and finishes his address, and the assembly breaks up. Their clamour is the most disagreeable and tremendous that can be conceived, owing to a hollow and hard bone placed in the throat, which the English call the throttle-bone. These monkeys are very fierce, quite untameable, and bite dreadfully ; though not carnivorous, they excite terror by their frightful voice and ferocious aspect.

#### ROYAL MONKEY, OR ALLOUATE.

THIS species or variety, which the Indians call the king of the monkies, is of a reddish bay colour, equally large and noisy ; the natives are particularly fond of its flesh. Its native country is Guiana, where the former species is not to be found.

#### FOUR-FINGERED MONKEY, OR COAITA.

THIS species is distinguished by its four fingers, its hands being quite destitute of a thumb ; but the feet have five toes with flat nails ; its face is long and flat, of a swarthy flesh colour ; its eyes are sunk in the head ; its ears like the human ; its limbs are of great length, and remarkably slender ; its body is also slender, about a foot and a half long ; its tail is about two feet long, naked below, near

the end, and so prehensile as to serve every purpose of a hand. Its colour, unless of its face, is uniformly black.

It inhabits Peru, Brasil, Guiana, and the neighbourhood of Carthagera. They are the most active of monkies, and quite enliven the forests of America.

They are sometimes brought to Europe ; but they are very tender, and seldom live long in our climate. On account of the length and slenderness of their legs and tail, they are sometimes called spider monkies.

Unlike the preacher and royal monkey, they are of a mild and docile disposition.

#### FEARFUL MONKEY, OR SAJOU.

THIS is a monkey with a round head and a short flesh coloured face, with a little down on it ; the hair on the forehead is more or less high in different subjects ; the top of the head is covered with pretty long black, or dusky hair, as are likewise the hind part of the neck and the middle of the back ; the rest of the body and the limbs are of a pale brown ; the hair on the breast and belly very thin ; the hands and feet are covered with a bluish black skin ; the nails on its toes are flat ; its tail is longer than the head and body, and is often carried over the shoulders ; the hair upon it is of a deep brown colour, very long, and appears very bushy from beginning to end.

It inhabits Guiana, is a lively species, but capricious in its affections in a state of captivity, having a great fondness for some persons, and as great an aversion to others ; they are very agile, and their nimbleness and dexterity are extremely amusing. Of all the sapajous, their constitution seems to be the best adapted to our climate. If

kept warm in a chamber during the winter, they live comfortably in Europe for several years. They have been known to produce in France. They are of the size of a half-grown cat.

#### CAPUCHIN MONKEY, OR SAI.

ON the toes of this species there are crooked claws, not flat nails, as on those of the former; but in every other particular, the two are so much alike, that this circumstance seems to be the chief difference between them.

#### WEEPER MONKEY.

THIS monkey smells of musk, is of a melancholy disposition, makes a plaintive noise, and appears as if always weeping; yet he is much disposed to imitate whatever he sees done; his face is round and flat, of a reddish brown colour; on the upper part of his head and body, his hair, which is very long and thinly dispersed, is black, tinged with brown; beneath, and on the limbs, it is tinged with red; the tail is black, and much longer than the head and body, which exceed not fourteen inches; he has a flat nail on each toe. Both old and young of this species appear to be deformed. They inhabit Surinam and Brasil.

They keep in large companies, and make a great chattering, especially in stormy weather, and reside much on a species of tree which bears a podded fruit on which they feed. They are mild, docile, and timid.

Buffon mentions a variety with a white throat. The three last species are very nearly allied, and frequently confounded by describing.

## ORANGE, OR SQUIRREL MONKEY.

THIS monkey is of the size of a squirrel, of a brilliant gold colour in Brasil, its native country; it smells of musk, is a very tender animal, and is seldom brought to Europe alive. It has a round head, a nose a little pointed; and the tip of its nose, and a circular space round its mouth, black; its ears are hairy; the hair on its body is short, woolly, and fine; in the faded state in which it is seen in this country, of a yellow and brown colour; the nails on its hands are flat; those on its feet like claws.

From the gracefulness of its movements, the smallness of its size, the brilliant colour of its hair, the largeness and vivacity of its eyes, it has uniformly been preferred to all the other sapajous; it is indeed the most beautiful of this tribe. As the tail is less prehensile than that of the former species, it seems to form the shade between the sapajous and sagoins.

## HORNED MONKEY.

THIS monkey has obtained the epithet horned, from two tufts of hair that stand up like horns on its head; its eyes are bright, but of a dusky colour; its ears are like those of the human body; its face, sides, belly, and fore legs, are of a reddish brown; the upper part of its arms, its neck, and the upper part of its back are yellowish; the top of its head, the lower part of its back, its hind legs, and all its feet are black; the body is about fourteen inches long; the tail about fifteen, prehensile, and covered with short hair. It inhabits America.

## ANTIGUA MONKEY

HAS a short nose, black face, hair on each side long ; back and sides orange and black, intimately mixed ; belly white ; outside of the legs black : inside ash coloured ; tail of a dusky ash ; its length twenty inches ; body eighteen. This seems a large species, and is described by Mr. Pennant from one which was brought from Antigua ; but its real native place was not known. It was a lively sportive animal : the tail is strongly prehensile.

## LEMUR TRIBE.

THE animals composing the present tribe have a considerable resemblance to the monkies in their hand-like paws, but void of their petulant and mischievous disposition. They differ from them principally in the shape of the head, which is somewhat like that of a fox, and in the length of their hind legs. Except in using their paws as hands, none of these creatures have any resemblance whatever to mankind.

The principal Linnean characters of the tribe are, four front teeth in the upper jaw, the intermediate ones remote ; six long, compressed, parallel teeth in the under jaw ; the canine teeth solitary, and the grinders somewhat lobated.

There are in the whole at least thirteen species ; but it is only of one of these that we have hith-

to been able to obtain any thing, except mere description.

### SLOW LEMUR.

THE slow lemur is about the size of a small cat. Its body is of an elegant pale brown, or mouse colour. The face is flattish, and the nose somewhat sharpened. The eyes are extremely prominent; they are surrounded with a circle of dark brown, and a stripe of the same colour runs down the middle of the back.

This animal is found in the island of Ceylon, and in various parts of the East Indies.

It is very slow in its motions, and, from this circumstance, has actually been ranked by some naturalists among the sloths, though in no other respect resembling them. It is a nocturnal animal, and sleeps, or at least lies motionless, during the greatest part of the day. In captivity it will feed on boiled rice, small birds, or insects. Its odour is said to be disagreeable.

The late learned and accomplished sir William Jones has given a pleasing general description of this little creature, in the fourth volume of the Asiatic reseaches; and as it is always interesting to observe the habits of an animal, even in a domestic state, in its native country, I shall insert an extract from his curious paper.

“ In his manners he was for the most part gentle, except in the cold season, when his temper seemed wholly changed; and his Creator, who made him so sensible of cold, to which he must often have been exposed even in his native forests, gave him, probably for that reason, his thick fur, which we rarely see on animals in these tropical climates. To me, who not only constantly fed him, but



SLOW LEMUR





bathed him twice a week in water accommodated to the seasons, and whom he clearly distinguished from others, he was at all times grateful ; but when I disturbed him in winter he was usually indignant, and seemed to reproach me with the uneasiness which he felt, though no possible precautions had been omitted to keep him in a proper degree of warmth. At all times he was pleased with being stroked on the head and throat, and frequently suffered me to touch his extremely sharp teeth ; but his temper was always quick, and when he was unseasonably disturbed, he expressed a little resentment, by an obscure murmur, like that of a squirrel, or a greater degree of displeasure by a peevish cry, especially in winter, when he was often so fierce, on being much importuned, as any beast of the woods.

“ From half an hour after sun-rise to half an hour before sun-set, he slept without intermission, rolled up like a hedge-hog ; and, as soon as he awoke, he began to prepare himself for the labours of his approaching day, licking and dressing himself like a cat ; an operation which the flexibility of his neck and limbs enabled him to perform very completely ; he was then ready for a slight breakfast, after which he commonly took a short nap ; but when the sun was quite set he recovered all his vivacity.

“ His ordinary food was the sweet fruit of this country ; plantains always, and mangoes during the season ; but he refused peaches, and was not fond of mulberries, or even of gualavas ; milk he lapped eagerly, but was content with plain water. In general he was not voracious, but never appeared satisfied with grasshoppers ; and passed the whole night, while the hot season lasted, in prowling for them. When a grasshopper, or any insect, alighted within his reach, his eyes, which he fixed

on his prey glowed with uncommon fire; and, having drawn himself back to spring on it with greater force, he seized the prey with both his fore paws, but held it in one of them while he devoured it. For other purposes, and sometimes even for that of holding his food, he used all his paws indifferently as hands, and frequently grasped with one of them the higher part of his ample cage, while his three others were severally engaged at the bottom of it; but the posture of which he seemed fondest was to cling with all four of them to the upper wires, his body being inverted. In the evening he usually stood erect for many minutes, playing on the wires with his fingers, and rapidly moving his body from side to side, as if he had found the utility of exercise in his unnatural state of confinement.

“A little before day-break, when my early hours gave me frequent opportunities of observing him, he seemed to solicit my attention; and if I presented my finger to him he licked or nibbled it with great gentleness, but eagerly took fruit when I offered it; though he seldom ate much at his morning repast: when the *day brought back his night*, his eyes lost their lustre and strength, and he composed himself for a slumber of ten or eleven hours.

“My little friend was, on the whole, very engaging; and when he was found lifeless in the same posture in which he would naturally have slept, I consoled myself with believing that he died without much pain, and lived with as much pleasure as he could have enjoyed in a state of captivity.”

In the year 1755, M. D’Obsonville purchased one of these animals of an Indian. He was very slow in his motions, so that even when he seemed desirous of moving fast, he scarcely went above

six or eight yards in a minute. His voice was a kind of whistling, by no means unpleasant. When his prey was attempted to be taken from him, his countenance changed to an appearance expressive of chagrin, and he inwardly uttered a tremulous, acute, and painful note. He was melancholy, silent, and patient. He generally slept during the day with his head resting upon his hands, and his elbows between his thighs. But in the midst of this sleep, although his eyes were closed, he was exceedingly sensible to all impressions from without, and never neglected to seize whatever prey came inconsiderately within his reach. Though the glare of sun-shine was very unpleasant to him, it was never observed that the pupils of his eyes suffered any contraction.

During the first month he was kept with a cord tied round his waist, which, without attempting to untie, he sometimes lifted up with an air of grief. M. D'Obsonville took charge of him himself, and at the beginning he was bitten four or five times for offering to disturb or take him up; but gentle chastisement soon corrected these little passions, and he afterwards gave him the liberty of his bed-chamber. Towards night the little animal would rub his eyes, then looking attentively round, would climb upon the furniture, or more frequently upon ropes placed for that purpose.

Sometimes M. D'Obsonville would tie a bird in the part of the chamber opposite to him, or hold it in his hand in order to invite him to approach: he would presently come near with a long careful step, like a person walking on tip-toe to surprise another. When within a foot of his prey, he would step and raising himself upright, advance gently, stretching out his paw, then, at once seizing, would strangle it with remarkable celerity.

He perished by an accident. He appeared much

attached to his master, who always used to caress him after feeding. His return of affection consisted in taking the end of M. D'Obsonville's fingers, pressing them, and at the same time fixing his half opened eyes on those of his master.

### LORIS.

THIS lemur has a long dog-like visage, high forehead, ears large, thin, and rounded ; a body slender and weak ; its limbs very long and slender ; on the interior toe of every foot, a crooked claw, and flat nails on the rest ; the thumb on each foot separate, and distinct from the toes ; it has no tail any more than the former ; the hair on its body is universally short, and delicately soft ; on the upper parts tawny, beneath whitish ; on its head there is a dart-shaped spot, with the end pointing to the interval between its eyes, which are surrounded with a dusky space.

The length of the animal, measured from the tip of the nose, is only eight inches ; it differs totally in form and in nature from the preceding, though Buffon seems to confound the two species in his description of the loris. This is very active, ascends trees most nimbly, and has the actions of an ape. If we may credit Seba, the male climbs the trees, and tastes the fruits before it presents them to its mate.

### WOOLLY LEMUR, OR MONGOUS.

THIS creature, of the size of a cat, has its eyes lodged in a circle of black, and the space between them of the same colour ; the irides of its eyes of an orange colour ; short round ears ; the end of the nose black ; the rest of the nose, and the lower sides of its cheeks, white. When in full

TARSIER



WOOLY LEMUR





PL-7

RING TAILLEMER



MURINE LEMER



health, the whole upper part of the body is covered with long soft and thick fur, a little curled or waved, of a deep brownish ash colour; its tail is very long and covered with the same sort of fur of the same colour; its breast and belly are white; the hands and feet naked and dusky; the nails, as in the two former species, flat; except that of the inner toe of the hind feet; it varies sometimes with white or yellow paws, and a face wholly brown.

It inhabits Madagascar and the adjacent isles; turns its tail over its head to protect it from rain; feeds on fruits, and sleeps on trees; it is very good natured, and very sportive, but very tender; it is found as far as Celebes or Macassar.

Buffon gives the history of one that he had in his possession for several years. He says, that its tongue was rough like that of a cat; that when permitted, it would continue licking a person's hand till it was inflamed, and often finished this operation with a severe bite. It amused itself with gnawing its own tail, and actually destroyed four or five vertebræ. Whenever he could escape, he went into the neighbouring shops in quest of fruits, sugar, and sweet meats, opened the boxes that contained them, and helped himself. He dreaded cold and moisture; in cold weather he never left the fire, and would stand on end to warm himself. His movements were extremely brisk, and sometimes petulant. He often slept during the day; but his slumbers were so light, that the smallest noise awaked him. They are, however, generally gentle in captivity.

#### RING-TAILED LEMUR.

THIS, says the count de Buffon, is a beautiful animal; his aspect is agreeable; his figure ele-

gant, and his hair always neat and glossy ; he is remarkable for the largeness of his eyes ; for the height of its hind legs, which are much longer than those before ; and for his large and beautiful tail, which is always erect, always in motion, and garnished with thirty alternate rings of black and white, well marked and separated from each other ; his manners are gentle ; and though he bears great resemblance to the monkies, he possesses none of their malicious dispositions. In a state of liberty, this species live in society, and are found in Madagascar, in troops of thirty or forty. In a domestic state, the prodigious rapidity of their movements, renders them incommodious : it is for this reason they are generally chained ; for, though extremely active and vivacious, they are neither mischievous nor ferocious ; they tame to such a degree, as to go out and return without running off. Their gait is oblique, like that of all animals that have hands instead of feet. They leap more gracefully than they walk, are rather silent, uttering only a short acute cry when surprised or irritated ; they sleep in a sitting posture, with the head resting on the breast ; their body is longer but not thicker than that of a cat ; but the height of their legs gives them an appearance of being larger than they really are : their hair, though soft to the touch, stands always erect.

But, to give a more accurate description of the animal, it has the point of its nose black, with black circles round its eyes ; the rest of its face is white ; and its ears stand erect ; the hair on the top of its head, on the hind part, is of a deep ash colour ; the back and sides of a reddish ash colour ; the outsides of the limbs are paler ; its belly and the inside of the limbs are white ; all its hair is very soft, close, and fine ; erect like the pile of velvet ; its tail, which is twice the

length of the body, is marked, as before observed, with regular rings of black and white ; when the animal sits, it is twisted round its body, and brought over its head ; its nails are flat, particularly those of the thumbs of the hind feet ; the inside parts of the hands and feet are black. In addition to its other agreeable qualities, it is a very cleanly creature.

#### RUFFED LEMUR, OR VARI.

IN this creature, the irides of the eyes are of a deep orange colour ; it has long hair round the sides of the head, standing out like a ruff, from which it has obtained its name ; the colour of the whole animal is black ; but not always, being sometimes found white spotted with black ; but having always black feet ; it is rather larger than the last species ; it is very fierce in a wild state, and makes so violent a noise in the woods, that it is easy to mistake the noise of two for that of an hundred ; some have compared the noise it makes, to the roaring of a little lion. When taken young and tamed, they are very gentle and good natured ; their hind legs and thighs, like those of the two preceding species, are very long, which makes their pace oblique and bounding. These three species seem to be confined to Madagascar, Mosambique, and the lands adjacent to those islands.

#### TARSIER.

THE count de Buffon joins this species with the woolly jerboa, though at the same time he is particularly careful to point out their specific difference. Mr. Pennant has described it from two specimens in the cabinet of Dr. Hunter ; but en-

ters it as an exception from the genus with which he has classed it, on account of its having in each jaw, only two cutting and two canine teeth ; its name is derived from that part of the foot called the tarsus, the bones of which are prodigiously long in proportion to the size of the animal, which is no bigger than a middling rat ; its length from nose to tail is near six inches, to the hind toes eleven and a half ; its tail nine inches and a half.

The tarsier, called by the Macassars, podje, has a pointed visage, a slender nose, ending in two lobes ; eyes large and prominent ; ears erect, broad, naked, and semi-transparent, an inch and a half long ; between them, on the top of the head, it has a tuft of long hairs ; four slender toes, and a distinct thumb on each foot, with sharp-pointed claws ; the thumbs of the hind feet are broad, and greatly dilated at their ends ; the hairs on the legs and feet short, white, and thin ; the tail is almost naked ; the greater part of it is round and scaly like that of a rat ; but grows hairy towards the end, which is tufted ; the hair on its body is soft, but not curled, of an ash colour mixed with tawny.

It inhabits the remotest islands of India, especially Amboina.

#### LITTLE MAUCAUCO, OR MURINE LEMUR.

THIS seems to be the same animal which Buffon calls the Madagascar rat. It is supposed to live in the palm trees, and to feed on fruits ; it eats, holding its food in its fore feet, like the squirrels ; is lively, has a weak cry, and rolls itself up when it sleeps ; it is rather less than the black rat ; it has a dark space round its eyes, which are very large and full ; the upper parts of its body are



PL 18



INDRI

ash coloured, the lower white ; its head is round, nose sharp, and whiskers long ; it has two canine teeth in each jaw ; four cutting teeth in the upper jaw ; six in the lower, and seven grinders on each side ; its ears are large, roundish, naked, and membranaceous ; its toes are long, but of unequal lengths ; the nails round, and very short ; its tail is as long as the body, and is prehensile.

### INDRI.

THIS animal is entirely of a black colour, except on the face, which is greyish ; a greyish cast also prevails towards the lower part of the abdomen, and the rump is white. The face is of a lengthened, or dog-like form ; the ears shortish, and slightly tufted ; the hair or fur is silky and thick, and in some parts of a curly, or crisped appearance ; it is the largest animal of this genus, and is said by Mons. Sonnerat, its first describer, to be three feet and a half high. It is said to be a gentle and docile animal ; and to be trained, when taken young, for the chase, in the manner of a dog. Its voice resembles the crying of an infant. It is a native of Madagascar, where it is known by the name of Indri, which is said to signify *the man of the wood*. The nails in this species are flat, but pointed at the ends ; and there is no appearance of a tail.

### POTTO.

THIS is an obscure species, known only from the description and figure in Bosman's account of Guinea. He ascribes to it, on the authority of the negroes, the tardy manners of the sloth. He assures us that it is inconceivably ugly ; and when it is old, is covered with reddish flocky hair,

## 64 FLOCKY, AND HEART-MARKED LEMUR, &c.

like wool ; though it appears brown and smoothish when young. The size is not mentioned.

### FLOCKY LEMUR.

THIS animal is described by Sonnerat, as a large species ; measuring a foot and nine inches from nose to tail ; the tail being also nine inches long. Its colour is a pale yellowish ferruginous on the upper parts, and white beneath ; the tail, bright ferruginous. The fur is extremely soft and crisped, and of a deep colour on the region of the loins ; the face is black ; the ears small ; the eyes large, and of a greenish grey ; in the upper jaw are two fore teeth ; in the lower jaw, four ; the feet have five fingers, which have long claws, except the thumbs, which have rounded nails. Two smaller varieties of the flocky lemur, are described and figured in the supplement of Buffon.

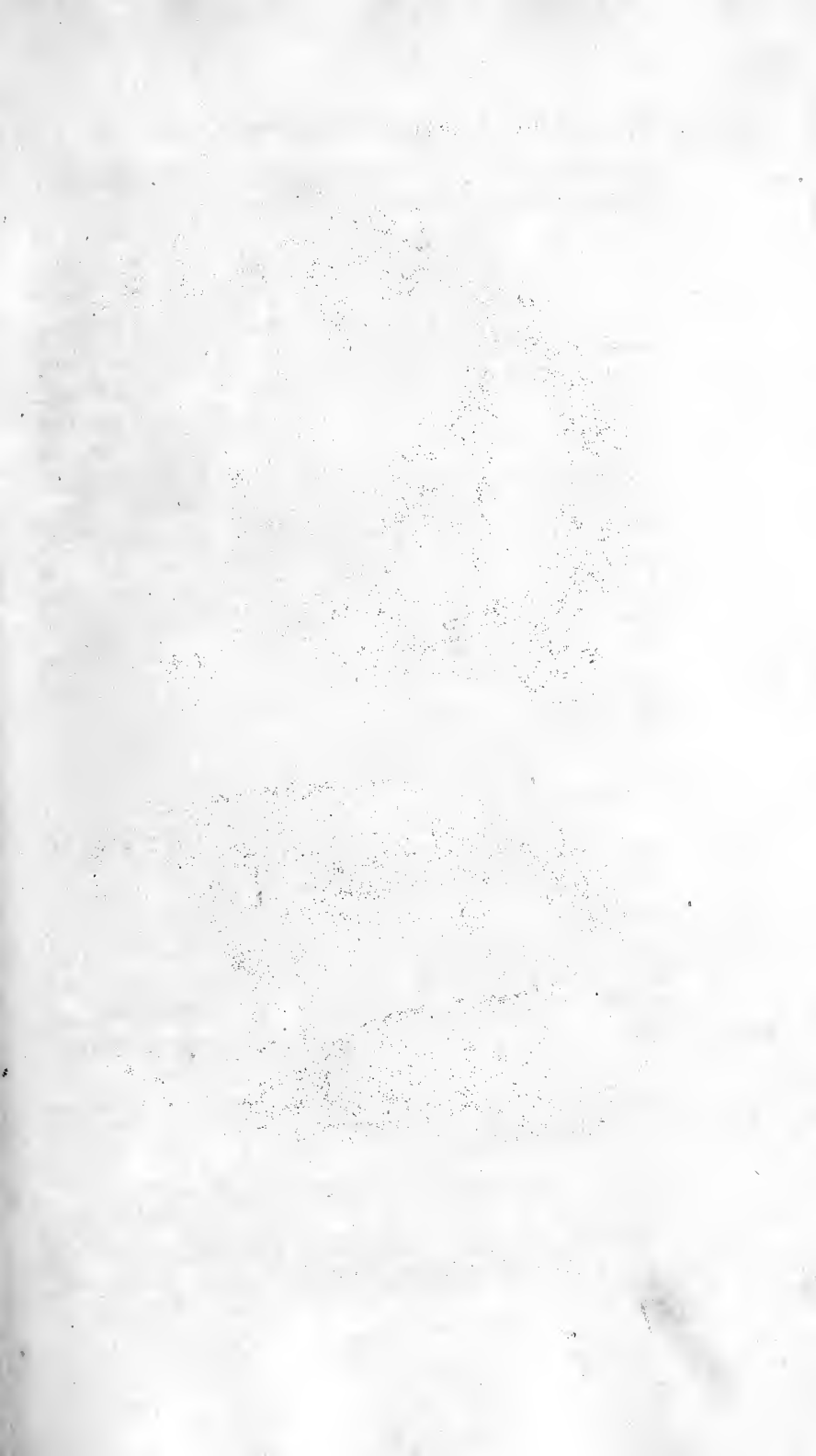
### HEART-MARKED LEMUR.

THIS animal has the face, upper part of the neck and back, hind part of the thighs, and the tail, black ; the under part of the neck and body, and the limbs, white. On the forehead is a large heart-shaped spot, pointing downwards. The tail is considerably longer than the body, and thickens gradually towards the tip. The feet are furnished on all the toes with strong sharp black claws ; in which particular it differs from other animals of this tribe. It is supposed to be an inhabitant of South America.

### GALAGO, OR WHITISH LEMUR.

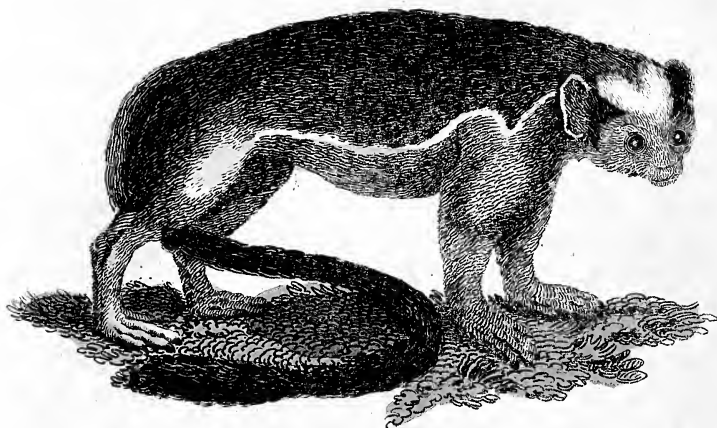
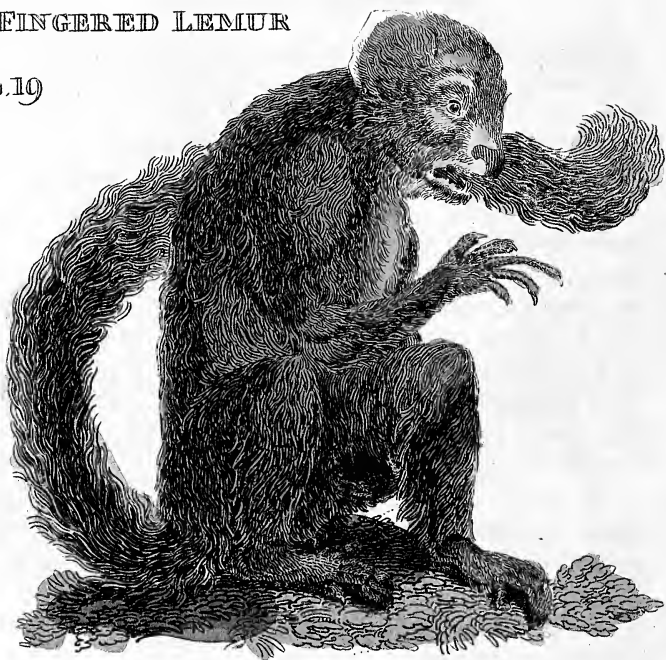
THIS is one of the smaller species, measuring about six or seven inches from the nose to the tail,





LONG-FINGERED LEMUR

PL. 19



HEART MARKED LEMUR

which is about eight inches long. Its colour is yellowish, white above, and ash-coloured beneath ; but the tail is ferruginous, and the head almost entirely grey. It is to be observed also, that the hairs on the body are grey, for the greatest part of their length, the tips alone being white ; thus causing the white, or whitish yellow tinge, before mentioned. The ears are thin, upright, rounded at the tips, and very large. The hind legs are much longer than before ; the index, or first finger of the hind feet is furnished, as in most others of this genus, with a sharp claw, while all the rest have rounded nails. The galago is an animal of a mild disposition ; it is almost always found on trees, and lives on insects, which it easily catches with its fore feet, and devours with singular greediness. It brings forth its young in the hollow of trees, where it prepares its nest, which it lines with herbage. The negroes of Galam hunt these animals for food.

## LONG-FINGERED LEMUR.

THIS very singular species has much the appearance of a squirrel. M. Sonnerat observes that it seems allied to the lemurs, the squirrels, and the monkies. It measures from fourteen to eighteen inches from the nose to the tail, which is about the same length. The general colour of the animal is a pale ferruginous brown, mixed with black and grey ; on the head, round the eyes, and on the upper parts of the body, the ferruginous brown prevails, with a blackish cast on the back and limbs ; the tail is entirely black ; the sides of the head, the neck, the lower jaw, and the belly, are greyish ; there is also a kind of woolly hairs of this colour, and of two or three inches in length, scattered over the whole body ; the thighs and

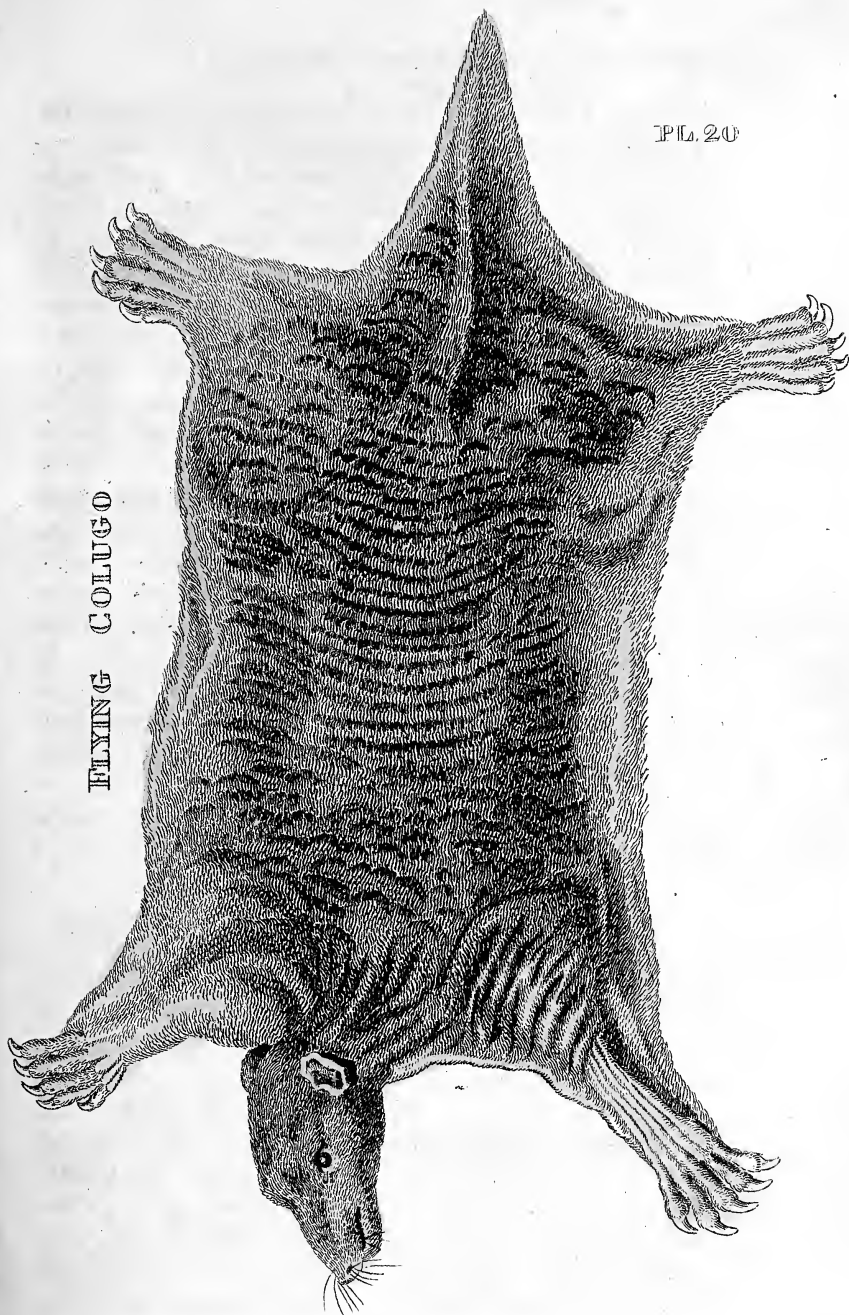
legs have a reddish cast; the black prevails on the feet, which are covered with short hairs of that colour; the head is shaped like that of a squirrel, and there are two cutting teeth in front of each jaw; the ears are large, round, and naked, resembling those of a bat, and of a black colour. The feet are long, and somewhat resemble those of the tarsier; the interior toes of the hind feet are short, and furnished with flat, round nails, as in the lemurs; but the principal character of the animal consists in the extraordinary structure of the fore feet, which have the two middle toes of an uncommon length, most extremely thin, and perfectly naked, except at their base; all the claws on the fore feet are sharp and crooked. It is a timid, slow, mild animal, which sleeps almost continually; its eye resembles that of an owl, and cannot well endure strong day-light. It is a native of Madagascar, where it inhabits the woods. It is extremely rare, and is supposed to feed upon fruits, insects, &c. Its native name is aye-aye, which is said to be taken from its natural voice, or cry, which resembles a feeble scream.

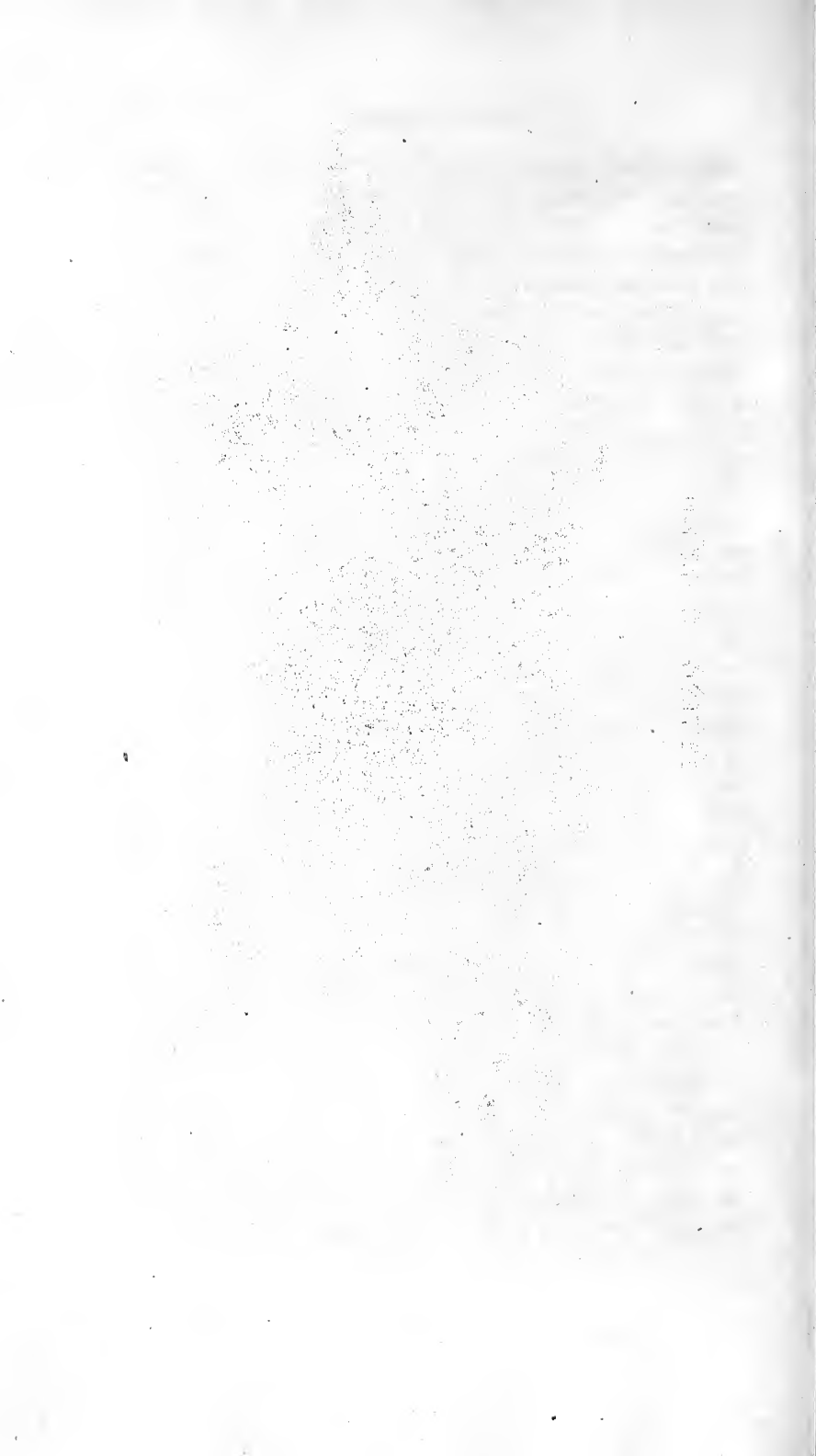
#### FLYING COLUGO, OR FLYING LEMUR.

THIS very singular animal is so remarkably distinguished from all others, that it is made a distinct genus in the modern systematic arrangement.

The colugo is a native of the Molucca and Philippine islands, where it is said to frequent woody places, and to feed principally on fruits. It almost constantly resides on trees, and makes use of its membranes in the same manner as the flying squirrels. In descending from the top of a tree, it spreads its membranes, and balances

FLYING COLUGO





itself to the place it aims at in a gentle manner ; but in ascending it uses a leaping pace. It has two young, which are said to adhere to its breasts by the mouth and claws. The whole length of the animal is about three feet ; the breadth, when expanded, nearly the same : the tail is slender, and about a span long. The membrane, or expansile skin by which it is enabled to fly, is continued on each side, from the neck to the fore feet, thence to the hind feet, and again to the tip of the tail ; it is not naked, like the skin of a bat's wing, but covered with fur in the same manner as the body : the inner, or lower side, however, appears membranaceous, and is marked by numerous veins and fibres dispersed through it. The whole upper side of the animal is generally of a deep ash colour, most so in those which are full grown, and blacker in the younger, or less advanced specimens ; the back also, in the full grown animals, is crossed transversely with blackish lines ; towards the edges, is commonly a tinge of yellowish, and the whole underside, both of the body and membranes, is of a yellowish colour. The head is long ; the mouth rather small ; the tongue, according to Dr. Pallas, fleshy, broad, rounded, attenuated on the edges, and ciliated with papillæ, as in the opossums ; it is also slightly beset with papillæ on its surface. There are no fore teeth in the upper jaw ; but in the lower are six, which are short, broad, and pretty deeply pectinated, so as to resemble little combs on their upper part ; the canine teeth, or at least those which Dr. Pallas considers as such, are shaped somewhat like the petrifications known by the name of glossopetræ, being triangular, very broad at their base, very short, sharp-pointed, and ser-

rated; the grinders, or molares, which are generally four, both above and below, are of an abrupt or truncated form, and roughened with conical protuberances. The ears are small, round, membranaceous, and marked internally by numerous semicircular transverse streaks, as in a bat. The legs are clothed with a soft yellow down; there are five toes on each foot, united by a common membrane, and terminating in large, thin, broad, very sharp crooked claws.

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### BAT TRIBE.

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THESE very singular animals would seem at sight to hold a kind of middle station between the quadrupeds and birds. It is, however, only in their power of raising themselves into the air by means of the membranes which extend round their body, that they are in the least allied to the latter, whilst with the other they claim a place, from their structure both externally and internally.

Bats have erect sharp-pointed teeth, placed near together. Their fore toes are lengthened, and connected by the membranes which perform the office of wings.

Their structure cannot be contemplated without admiration, the bones of the extremities being continued into long and thin processes, connected by a most delicately formed membrane or skin, capable, from its thinness, of being contracted at pleasure into innumerable wrinkles, so as to lie



in a small space when the animal is at rest, and to be stretched to a very wide extent for occasional flight.

Should a speculative philosopher, not aware of the anatomical impossibility of success, attempt, by means of light machinery, to exercise the power of flight, he could not hit on a more plausible idea than of copying the structure described. Accordingly, a celebrated author has represented a sage theorist busied in imitating, for this purpose, "the folding continuity of the wing of the bat."

Although this membrane enables the bat, after it has once raised itself from the ground, which it does with some difficulty, to flit along the air, yet all its motions, when compared with those of birds, are clumsy and awkward; and in walking, its feet appear so entangled with its wings, that it seems scarcely able to drag its body along.

The bat, like the mouse, is capable of being tamed to a certain degree; and we are told by Mr. White, that he was once much amused with the sight of a tame bat. It would take flies out of a person's hand. If you gave it any thing to eat, it brought its wings round before the mouth, hovering and hiding its head in the manner of birds of prey when they feed. The adroitness it shewed in shearing off the wings of the flies (which were always rejected) was worthy of observation; and pleased me much. Insects seemed to be most acceptable, though it did not refuse raw flesh when offered. While I amused myself with this wonderful quadruped, I saw it several times confute the vulgar opinion, that bats, when down on a flat surface, cannot get on the wing again, by rising with great ease from the floor. It ran, I observed, with more dispatch than I was

aware of, but in a most ridiculous and grotesque manner.

From experiments made by Spallanzani, on the long-eared, the horse-shoe, and the noctule bats, it appears that these animals possess some additional sense, which enables them, when deprived of sight, to avoid obstacles as readily as when they retained the power of vision. When their eyes were covered, or even put entirely out, they would fly about in a darkened chamber without ever hitting against the walls, and always suspend their flight with caution, when they came to a place where they could perch. In the middle of a dark sewer, that turned at right angles, they would always, though at a considerable distance from the walls, regularly bend their flight with the greatest nicety. When branches of trees were suspended in a room; they always avoided them; and flew betwixt threads hung perpendicularly from the ceiling, though these were so near each other, that they had to contract their wings in passing through them. Mr. Jurin supposes that the sense which enables them to perform these unaccountable operations, is lodged in the expanded nerves on the nose; but on that of the present, and several other species, the membrane in which these end, is wanting. Some have supposed, however, that this power of avoiding obstacles in the dark is dependant principally on their ears; for when the ears of the blinded bats were closed, they hit against the sides of the room, and did not seem at all aware of their situation.

Several were collected together for the purpose of the above experiments, and they were preserved in a box for more than a week. They refused every species of food for several days. During the day-time they were extremely desirous of retirement and darkness, and, while confined to the

box, never moved or endeavoured to get out while it was light ; and, when spread on the carpet, they commonly rested for a few minutes, and then beginning to look about, crawled slowly to a dark corner or crevice. At sun-set the scene was quite changed ; every one then endeavoured to scratch its way out of the box ; a continued chirping was kept up, and no sooner was the lid of the prison opened, than each was active to escape, either flying away immediately, or running nimbly to a convenient place for taking wing. When these bats were first collected, several of the females had young ones clinging to the breast in the act of sucking. One of them flew with perfect ease, though two little ones were thus attached to her which weighed nearly as much as their parent.

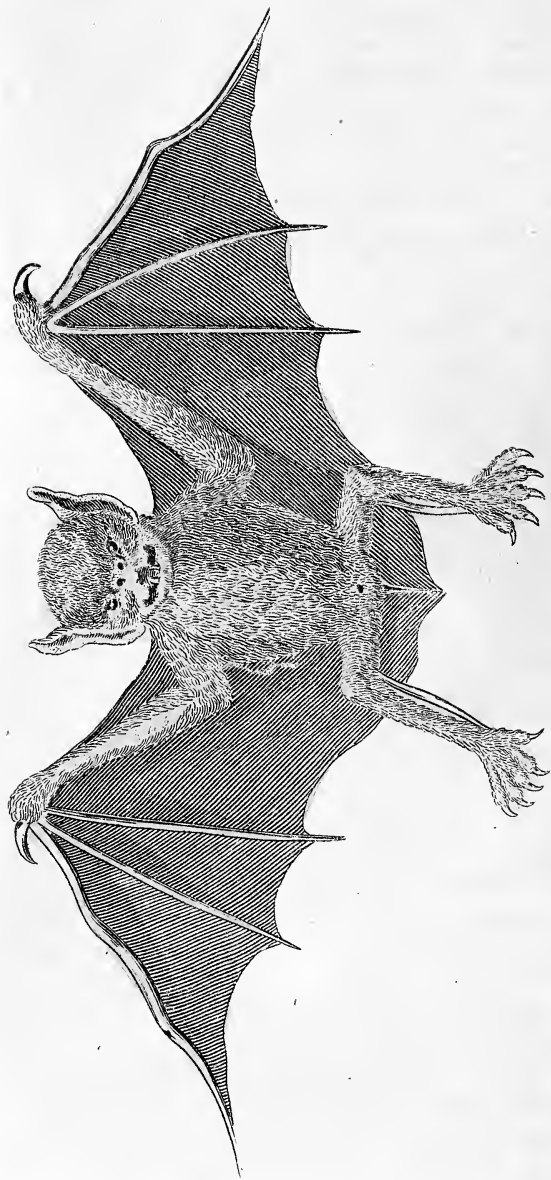
## COMMON BAT.

THE bat most common in England is about the size of a mouse ; or nearly two inches and a half long. The membranes that are usually called wings, (the extent of which, in a large bat, when fully expanded, is about nine inches,) when the animal flies, are kept stretched on every side, by the four interior toes of the fore feet, which are enormously long, and serve like masts that keep the canvas of a sail spread, and regulate its motions. The first toe is quite loose, and serves as a heel when the bat walks, or as a hook, when it would adhere to any thing. The hind feet are disengaged from the surrounding skin, and divided into five toes, somewhat resembling those of a mouse. The skin by which it flies is of a dusky black colour. The body is covered with a short fur, of a mouse colour, tinged with red. The eyes are very small ; the ears are black and roundish.

It makes its appearance early in summer, and

begins its flight in the dusk of the evening. It principally frequents the sides of woods, glades, and shady walks ; and is frequently observed to skim along the surface of pieces of water. It pursues gnats, moths, and nocturnal insects of every kind. It feeds upon these ; but will not refuse meat, whenever it can find it. Its flight is a laborious, irregular movement ; and if it happens to be interrupted in its course, it cannot readily prepare for a second elevation : so that if it strikes against any object, and falls to the ground, it is usually taken. It appears only in the most pleasant evenings, when its prey is generally abroad, and flies in pursuit with its mouth open. At other times it continues in its retreat ; the chink of a ruined building, or the hollow of a tree. Thus this little animal, even in summer, sleeps the greatest part of its time, never venturing out by day-light, nor in rainy weather ; never hunting in quest of prey, but for a small part of the night, and then returning to its hole. But its short life is still more abridged by continuing in a torpid state during the winter. At the approach of the cold season, the bat prepares for its state of lifeless inactivity, and seems rather to choose a place where it may continue safe from interruption, than where it may be warmly, or conveniently lodged. For this reason it is usually seen hanging by its hooked claws to the roofs of caves, regardless of the eternal damps that surround it. The bat seems the only animal that will venture to remain in these frightful subterranean abodes, where it continues in a torpid state, unaffected by every change of the weather. Such of this kind as are not provident enough to procure themselves a deep retreat, where the cold and heat seldom vary, are sometimes exposed to great inconveniences, for the weather often becomes so mild





PERUVIAN BAT

in the midst of winter as to warm them prematurely into life, and to allure them from their holes in quest of food, when nature has not provided a supply. These, therefore, have seldom strength to return ; but having exhausted themselves in a vain pursuit after insects which are not to be found, are destroyed by the owl, or any other animal that follows such petty prey.

The bat couples and brings forth in summer, generally from two to five at a time : of this Dr. Goldsmith is certain, that he has found five young ones in a hole together ; but whether they were the issue of one parent he cannot tell. The female has but two nipples, and those forward on the breast, as in the human kind.

The common bat is a harmless, inoffensive creature. It is true that it now and then steals into a larder, and, like a mouse, commits its petty thefts upon the fattest parts of the bacon. But this happens seldom ; the general tenor of its industry is employed in pursuing insects that are much more noxious to us than itself can possibly be ; while its evening flight, and its unsteady wabbling motion, amuse the imagination, and add one figure more to the pleasing group of animated nature.

#### PERUVIAN BAT.

This species has a head like a pug-dog ; large, straight, pointed ears, projecting forwards ; two canine teeth, and two small cutting teeth between them, in each jaw. The tail is inclosed in the membrane that joins the hind-legs ; and supported by two cartilaginous ligaments, which are involved in the membrane. The colour of its fur is of an iron grey ; its body is equal to that of a middle-sized rat : the extent of its wings is two feet five inches.

There is a variety of this species with hanging lips, like the chops of a mastiff: its nose and upper lip are divided: it has long, narrow, sharp-pointed ears. A few joints of its short tail stick out without the membrane, which at the same time extends far beyond it, is angular, and ends in a point. The claws on the hind-feet are large, hooked, and compressed sideways. The membranes of the wings are dusky, and very thin. The fur on the head and back is brown; on the belly cinereous; five inches long; extent of the wings, twenty. It inhabits Peru and the Musquito shore.

#### BULL-DOG BAT,

WITH broad round ears, touching each other in front; has a thick nose and pendulous lips; the upper part of the body is of a deep ash-colour, the lower paler; the tail is long; its five last joints are disengaged from the membrane. It is two inches long; its extent is nine and a half. It inhabits the West Indies.

#### SENEGAL BAT.

It has a long head; its nose a little pointed; short and pointed ears; fur of a tawny brown, mixed with ash-colour: belly paler; two joints of the tail free. It is four inches long; its extent twenty-one.

#### POUCH BAT, OR SLENDER TAILED BAT,

Is of a brown ash-colour; an inch and half long; inhabits Surinam; and has a small purse or pouch near the second joint of each wing. Its nose is somewhat lengthened, and the end beset



with fine whiskers ; the chin divided by a furrow, and the end of the tail free.

#### BEARDED BAT.

THIS is also a small species ; its nostrils are open a great way up ; it has very long hair on its forehead and under its chin : its fur is of a reddish brown above ; on its under side of a dirty white tinged with yellow. Its tail is included in a very veiny membrane.

#### NEW YORK BAT.

THIS has a head shaped like that of a mouse, only the top of the nose is a bifid ; two canine teeth in each jaw ; a very long tail inclosed in the membrane, the upper side of which membrane is covered with very long soft hair, of a bright tawny colour, lightest at the head ; the belly is paler. At the base of each wing there is a white spot. The wings are thin, naked, and dusky. The bones of the hind legs are very slender. Its length is two inches and a half ; its tail near two ; the extent of its wings ten inches and a half.

It inhabits North America, and is also found in New Zealand.

#### STRIPED BAT.

THIS animal inhabits Ceylon. It has a small short nose ; short broad ears pointing forward ; wings striped with black, sometimes with tawny and brown, and is two inches long. Its colour varies ; the upper parts are sometimes of a clear reddish brown ; the lower whitish.

## MOLUCCA.

THIS species was first described by that able naturalist, Dr. Pallas ; has a large head ; small ears ; a thick nose ; nostrils terminating outwards in form of a screw ; upper lip divided : its tongue is covered with papillæ and minute spines : its claw or thumb is joined to the wing by a membrane. The first ray of the wing is terminated by a claw. The end of the tail reaches beyond the membrane ; its upper parts are greyish, the belly of a dull white ; three inches and three quarters long : the extent of its wings about fifteen.

## HORSE SHOE BAT

HAS its name from the membrane of the shape of a horse shoe at the end of its nose ; its ears are large ; broad at their base, and sharp-pointed, inclining backward ; it is cinereous above, whitish beneath ; three inches and a half long from the nose to the tip of the tail ; its extent above fourteen.

There is a less variety of this species ; it is found about the Caspian ; inhabits Burgundy ; and has been discovered in Kent.

## NOCTULE.

It has its nose slightly bilobated ; ears small and rounded ; a small wart on the chin, and hair of a reddish ash colour. Its length is two inches and eight tenths ; the extent of its wings is fourteen inches. It inhabits Great Britain and France ; and is very common in Russia ; it flies high in search of food. There were taken under the eaves of Queen's College, Cambridge, in one

night, one hundred and eighty five ; the second night, sixty three ; the third night, two. Each that was measured had fifteen inches extent of wings. It has an unpleasant smell.

#### SEROTINE.

It has a longish nose ; ears short, but broad at the base ; and brown and ash coloured hair on the upper part of the body ; the belly of a paler colour : it is two inches and a half long ; inhabits France ; and is also found beyond lake Baikal : but has not as yet been discovered in any other part of the vast dominions of Russia. It has no tail.

#### PEPISTRELLE

HAS a small nose ; its upper lip swells out a little on each side ; its ears are broad. Its forehead is covered with long hair ; its lips are yellow ; its upper parts a yellowish brown ; the lower dusky. This is the least of bats, not an inch and a quarter long from nose to rump ; the extent of its wings only six and a half. It inhabits France, and is common about the rocky and mountainous parts of Siberia.

#### BARBASTELLE

HAS a sunk forehead, and long broad ears, touching each other at their base ; these conceal the face and head when viewed in front. The nose is short and flatted at the end ; the cheeks are full ; the upper part of the body of a dusky brown ; the lower ash coloured and brown. It is two inches long ; its extent ten and a half. It inhabits France.

**LONG-EARED BAT, OR OREILLAR.**

THE ears of this species are above an inch long, thin, and almost pellucid. Its body and tail both measure only one inch and three quarters. This and all other bats, except the ternati and the horse-shoe, have a lesser or internal ear, serving as a valve to close the greater when the animal is asleep. It inhabits Europe, and is found in Great Britain.

**LASIOPTER BAT**

HAS the forehead very prominent and rounded ; nose short ; the general colour ferruginous ; the upper part of the wings of a paler cast ; the ends, and lower parts, black ; this is one of the largest species.

**ROUGH-TAILED BAT.**

THIS species has upright ears, and small ; tail broad at base terminating in a point, thickly covered with hair ; colour a reddish brown. A small species : native country unknown.

**SLOUCH-EARED BAT**

HAS large pendulous ears, pointed at the ends ; nose obtuse ; tail long, included in a membrane, and terminated with a hook ; colour above deep chesnut, lighter on the belly, and cinereous on the sides ; length three inches and four lines ; extent of wing fifteen inches. Native of Guiana.



VAMPIRE BAT



## PITNOSE BAT.

THIS species is about the size of the common bat, which it also resembles in its general aspect, but differs in its colour, being of a pale yellowish ash-brown. Its principal character is a remarkable transverse concavity situated on the forehead, lined with a naked blackish skin; the nostrils are seated in a similar concavity at the tip of the nose. It is a native of India. The remaining species have no tails.

## VAMPIRE BAT, OR ROUSETTE.

THE vampire bat is in general about a foot long, and in the extent of its wings near four feet; but it is sometimes found larger, and specimens have been seen of six feet in extent. Its general colour is a deep reddish brown. The head is shaped like that of a fox; the nose is sharp and black; the teeth long and strong; and the tongue pointed, and terminated by sharp prickles. The ears are naked, blackish, and pointed; and the wings similar in colour to those of the common bat.

These animals are found in several parts of the East Indies, and in all the Indian islands; in New Holland, the Friendly isles, New Caledonia, and South America. They fly from sun-set to sun-rise, and reside during the day in the hollow trees. They are not carnivorous, but live principally on fruit, and are so fond of the juice of the palm tree, that they will intoxicate themselves with it till they fall senseless to the ground. They skim the water with perfect ease in their sportive moods, and frequently dip into it to wash themselves. Mr. Foster and several other writers inform us that they swarm like

bees, hanging near one another in vast clusters. At least five hundred were seen by this gentleman, hanging, some by their fore, and others by their hind legs, in a large tree, in one of the Friendly islands. Finch says, that "they hang by the claws to the bows of trees near Surat, in such vast clusters, as would surprise a man to see; and the noise and squealing they make is so intolerable, that 'twere a good deed to bring two or three pieces of ordnance, and scour the trees, that the country might be rid of such a plague as they are to it."

In a small island, one of the Philippines, Dampier tells us that he saw an incredible number of bats, so large that none of his company could reach from tip to tip of their wings, with their arms extended to the utmost. The wings were of a mouse colour, and on the joints were sharp crooked claws. In the evening, as soon as the sun was set, he says, these animals used to take their flight in swarms, like bees, to a neighbouring island; and they were seen to continue in immense numbers, till darkness rendered them no longer visible. The whole of the time from day break in the morning till sunrise, they occupied in returning to their former place; and this course they constantly pursued all the time the ship remained stationed off that island.

At Rose Hill, near Port Jackson, in New Holland, it is supposed that more than twenty thousand of these animals were seen within the space of a mile. Some that were taken alive in New Holland, would almost immediately after eat boiled rice, and other food from the hand; and in a few days became as domestic as if they had been entirely bred in the house. Governor Phillip had a female, which would hang by one leg, a whole day, without changing its position, and in that



pendant situation, with its breast neatly covered with one of its wings, it would eat whatever was offered to it, lapping from the hand like a cat.

Linnaeus has given to this bat the specific denomination of *vampyrus*, from his conjecturing it to be the species that draws blood from people during their sleep : but there is reason to imagine, that this thirst for blood is not confined to a single species, but is common to most of the bat tribe. We are informed that the bats of Java seldom fail to attack those persons who lie with their extremities uncovered, whenever they can get access to them. Persons thus attacked, have sometimes been near passing from a sound sleep into eternity. The bat is so dexterous a bleeder as to insinuate its aculeated tongue into a vein without being perceived, and then suck the blood till it is satiated ; all the while fanning with its wings, and agitating the air, in that hot climate in so pleasing a manner, as to throw the sufferer into a still sounder sleep. These animals do not, however, confine themselves to human blood ; for M. Condamine, in his voyage to South America, says, that in his time they had, in certain parts, destroyed all the great cattle introduced there by the Missionaries.

Captain Stedman, whilst in Surinam, was attacked during his sleep by a vampyre bat ; and as his account of this incident is somewhat singular, and tends to elucidate the fact, we shall extract it in the language of his own narrative. “ I cannot here” says he, “ forbear relating a singular circumstance respecting myself, viz. that on waking about four o’clock one morning in my hammock, I was extremely alarmed at finding myself weltering in congealed blood, and without feeling any pain whatever. Having started up and rung for the surgeon, with a fire-brand in one hand, and

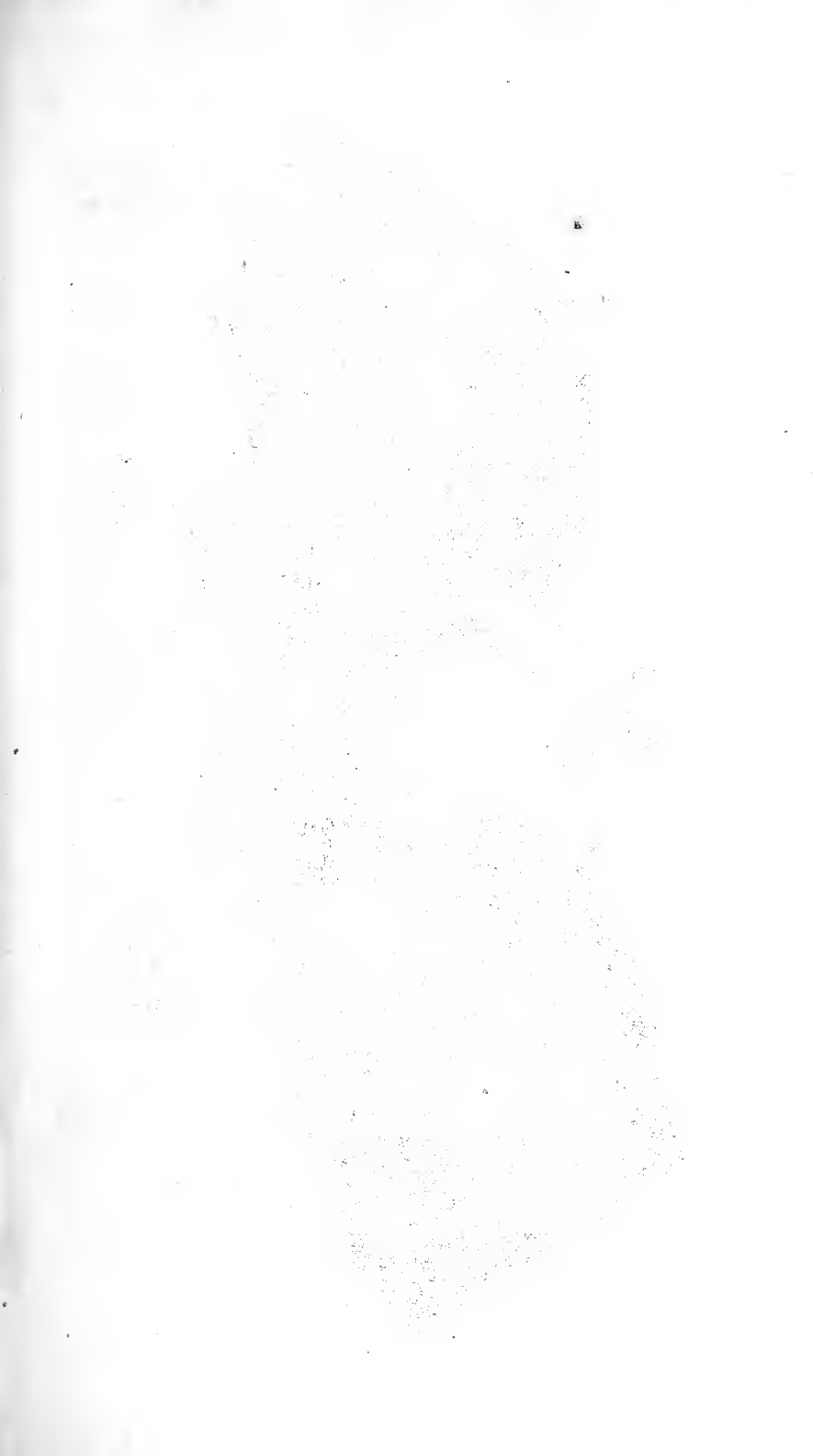
all over besmeared with gore ; to which, if added, my pale face, short hair, and tattered apparel, he might well ask the question,

‘ Be thou a spirit of health, or goblin damn’d ?

‘ Bring with thee airs from heav’n, or blasts from hell ?’

The mystery, however, was, that I had been bitten by the vampyre, or spectre of Guiana, which is also called the flying dog of New Spain, and by the Spaniards perro-volador ; this is no other than a bat of a monstrous size, that sucks the blood from men and cattle while they are fast asleep, even sometimes till they die ; and as the manner in which they proceed is truly wonderful, I shall endeavour to give a distinct account of it. Knowing, by instinct, that the person they intend to attack is in a sound slumber, they generally alight near the feet, where, while the creature continues fanning with his enormous wings, which keeps one cool, he bites a piece out of the tip of the great toe, so very small indeed, that the head of a pin could scarcely be received into the wound, which is consequently not painful ; yet through this orifice he continues to suck the blood, until he is obliged to disgorge. He then begins again, and thus continues sucking and disgorging till he is scarcely able to fly, and the sufferer has often been known to sleep from time into eternity. Cattle they generally bite in the ear, but always in places where the blood flows spontaneously.

“ Having applied tobacco ashes as the best remedy, and washed the gore from myself and my hammock, I observed several small heaps of congealed blood all round the place where I had lain, upon the ground ; on examining which, the surgeon judged that I had lost at least twelve or fourteen ounces during the night.”



SPECTRE BAT



The smell of these creatures is stronger, and more rank than that of a fox ; yet the Indians eat them, and declare their flesh to be excellent food. They become excessively fat at certain times of the year, and it is then that they are said to be most delicious. The French who reside in the isle of Bourbon, boil them in their bouillon, *to give it a relish !*

In New Caledonia the natives use the hair of these animals in the making of ropes, and in the tassels of their clubs ; interweaving it with the threads of cyperus squarrossus.

#### SPECTRE BAT

INHABITS South America ; like the former it lives in the palm trees, and grows very fat ; it has a long nose ; large teeth ; long, broad, upright ears ; a conic erect membrane at the end of the nose, bending at the end and flexible. The hair on its body is cinereous, and pretty long ; the wings are full of ramified fibres ; the membrane extends from hind leg to hind leg. From the rump extend three tendons, which terminate at the end of the membrane. It is seven inches and a half long ; extent two feet two.

#### JAVELIN BAT

HAS large pointed ears ; an erect membrane at the end of the nose, in form of the head of an ancient javelin. It inhabits the warm part of America ; is of the size of the common bat, and its fur is cinereous.

## LEAF BAT

HAS small rounded ears ; a membrane on the nose, of the form of an ovate leaf ; and a web between the hind legs. It is of the same size as the last. Its fur is of a mouse colour, tinged with red. It inhabits Jamaica, Surinam, and Senegal. It lives in the woods. Is of the size of a common bat.

## CORDATED BAT

HAS very broad and long ears ; at the end of the nose an upright heart-shaped membrane ; in Seba's figure the membrane is doubly heart-shaped, or with two cordated divisions, one above the other. The colour of the whole animal is a pale reddish brown ; the hind legs are connected by a web ; the body is thick and plump ; the extent of wing, according to Seba's figure, seems to be about fifteen inches ; length of body, from nose to rump, near four inches. Native of Ceylon, and the Molucca islands.

## GREAT SEROTINE BAT.

THIS species has a very long, straight, and strong nose, sloping down at the end ; ears long, erect, dilated towards the bottom, round at the end ; colour of the upper parts, a reddish chesnut ; sides of a clear yellow ; remainder of a dirty white ; length five inches and eight lines ; extent of wing two feet.

This species is described in the supplemental volume of the Count de Buffon's Natural History. It is a native of Guiana, where it is said to assemble in meadows, and other open places, in vast





THREE-TOED SLOTH



and both together in such numbers, as to darken the air.

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### SLOTH TRIBE.

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IN this tribe there have been hitherto only three species discovered, two of which are found more commonly in South America than in any other parts of the world. Their motions are unparalleled for slowness in the rest of the animal creation. The feet are furnished with strong hooked claws to enable them to climb the trees, where their voracity leads them to devour both the leaves and fruit. Their eyes are languid and heavy, and their whole countenance expresses so much misery, that no one can look upon them without pity. Their teats are seated on the breasts ; and in two of the species it is a remarkable circumstance, that, instead of distinct excretory apertures, there is only one common canal, as in birds.

The sloths have no cutting teeth in either jaw : the canine-teeth are obtuse ; and there are five grinders on each side. Their fore-legs are much longer than the hinder ones ; and the body is covered with hair, and not with scales, as in the armadillo, and some other animals of this order.

#### THREE-TOED SLOTH.

OF the three-toed sloth, which is a native of the hotter parts of South America, we have a very curious, though often-quoted account, written by

Kircher, principally from the authority of a provincial of the Jesuits, in South America, who had several of these animals in his possession, and tried many experiments with them relative to their nature and properties. Its figure is, (he says) extraordinary : it is about the size of a cat, has a very ugly countenance, and has its claws extended like fingers. It sweeps the ground with its belly, and moves so slowly, that it can scarcely go the length of a bow-shot in fifteen days, though constantly in motion ; hence it obtained the name of sloth. Nature has doubly guarded it against its enemies ; first, by giving it such strength in its feet, that whatever it seizes, is held so fast, that it will not suffer itself to be freed, but must die of hunger. Secondly, in having given it such an affecting countenance, that when it looks at any one who might be tempted to injure it, it is almost impossible not to be moved with compassion ; it also sheds tears, and upon the whole persuades one that a creature so defenceless and so abject ought not to be tormented.

To try an experiment with this animal, the provincial had one of them brought to the Jesuit's College at Carthage. He put a long pole under its feet, which it seized very firmly, and would not let go again. The animal, therefore, thus voluntarily suspended, was placed between two beams, where it remained without food for forty days, its eyes being always fixed on those who looked at it, who were so affected that they could not forbear pitying its dejected state. At length, being taken down, a dog was let loose on it, this, after a while, the sloth seized in its claws, and held till both died of hunger.

In ascending the trees, this animal carelessly stretches one of its fore paws, and fixes its long claw as high as it can reach. It then heavily raises

the body, and gradually fixes the other paw : and in this manner continues to climb, every motion being incredibly slow and languid. When the sloth once gets into the tree, we are told that it will not descend while a leaf or bud is remaining ; and it is added, that in order to save the slow and laborious descent which it would otherwise be obliged to make, it suffers itself to fall to the ground, its tough skin, and thick, coarse hair, sufficiently securing it from any unpleasant effect in its fall. Sometimes the sloths will suspend themselves by their claws from the branches of trees, and thus hanging, a branch may be cut off, and they will fall with it rather than quit their hold. One that was taken by some persons of the expedition under Woodes Rogers, was brought on board one of the vessels, and put down at the lower part of the mizen shrouds. It climbed to the mast-head ; occupying two hours in what a monkey would have performed in less than half a minute. It proceeded with a very slow and deliberate pace, as if all its movements had been directed by machinery.

These animals are always most active during the night, at which time they utter their plaintive cry, ascending and descending in perfect tune, through the hexachord, or six successive musical intervals. When the Spaniards first arrived in America, and heard this unusual noise, they fancied they were near some nation, the people of which had been instructed in our music.

When kept in a house, the sloth never rests on the ground, but always climbs on some post or door to repose. If a pole is held out to it, when on the ground, it will immediately lay hold, and, if it is fixed, climb to the top, and firmly adhere to it.

This singular animal has a small head, a naked

face, a blunt black nose, a little lengthened ; rather small external ears ; eyes small, black, round, and heavy, with a dusky line from the corner of each ; its face and throat are of a dirty white ; the hair on its body is long and very uneven, of a greyish brown, with a black line along the middle of its back ; the rest of its back, shoulders, and limbs, are spotted irregularly with black ; its tail is a mere stump ; its fore legs are short ; its hind legs are thick, long, and awkward ; its feet are small, but armed with large, sharp, strong claws. It grows to the bulk of a middle sized fox ; and inhabits most parts of the eastern side of South America. The female produces one young one, which she frequently carries on her back.

#### TWO-TOED SLOTH.

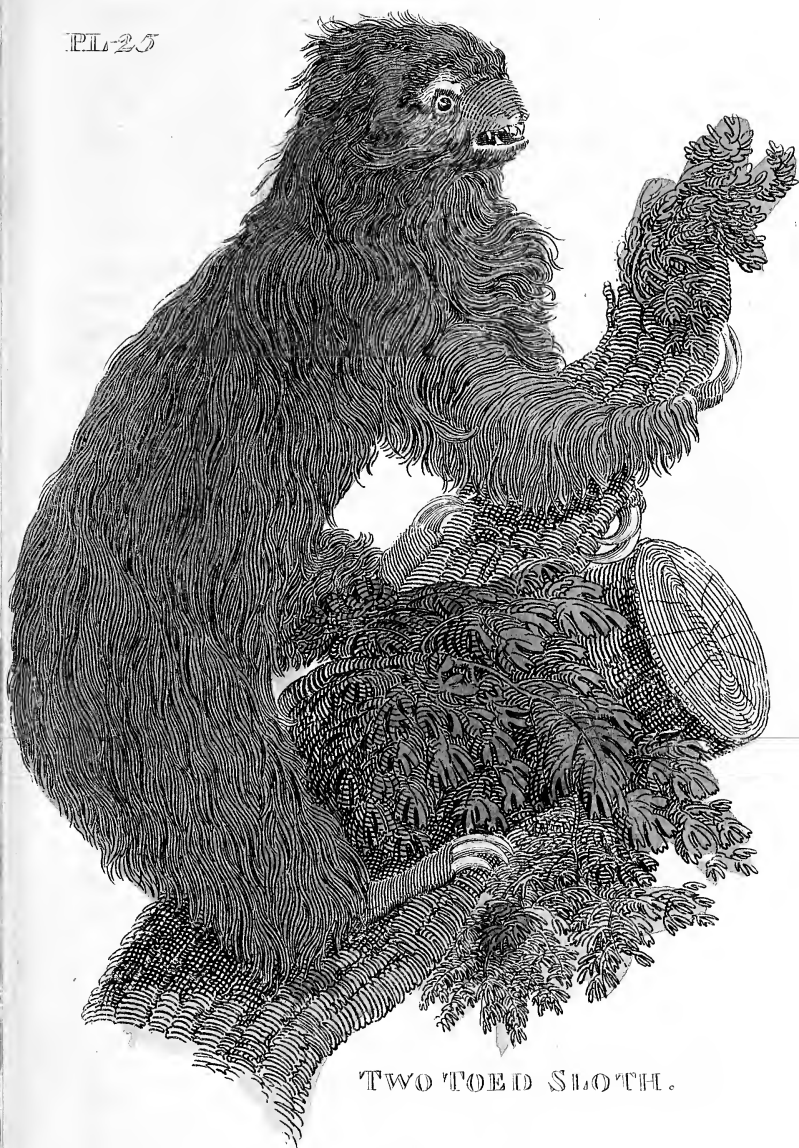
THIS species of the sloth has a round head ; a short projecting nose ; ears like those of the human body, lying close to the head ; two long and strong claws on the fore feet, three on the hind ; hair long and rough, in some parts curled and woolly ; in some of a pale red above, ash brown below, in others of a yellowish white below ; ash brown above. It inhabits South America and Ceylon.

It is more slender than the former species ; its coat is not so rough nor so variegated, and it is a more active animal, since it can ascend and descend a tall tree three times in a day.

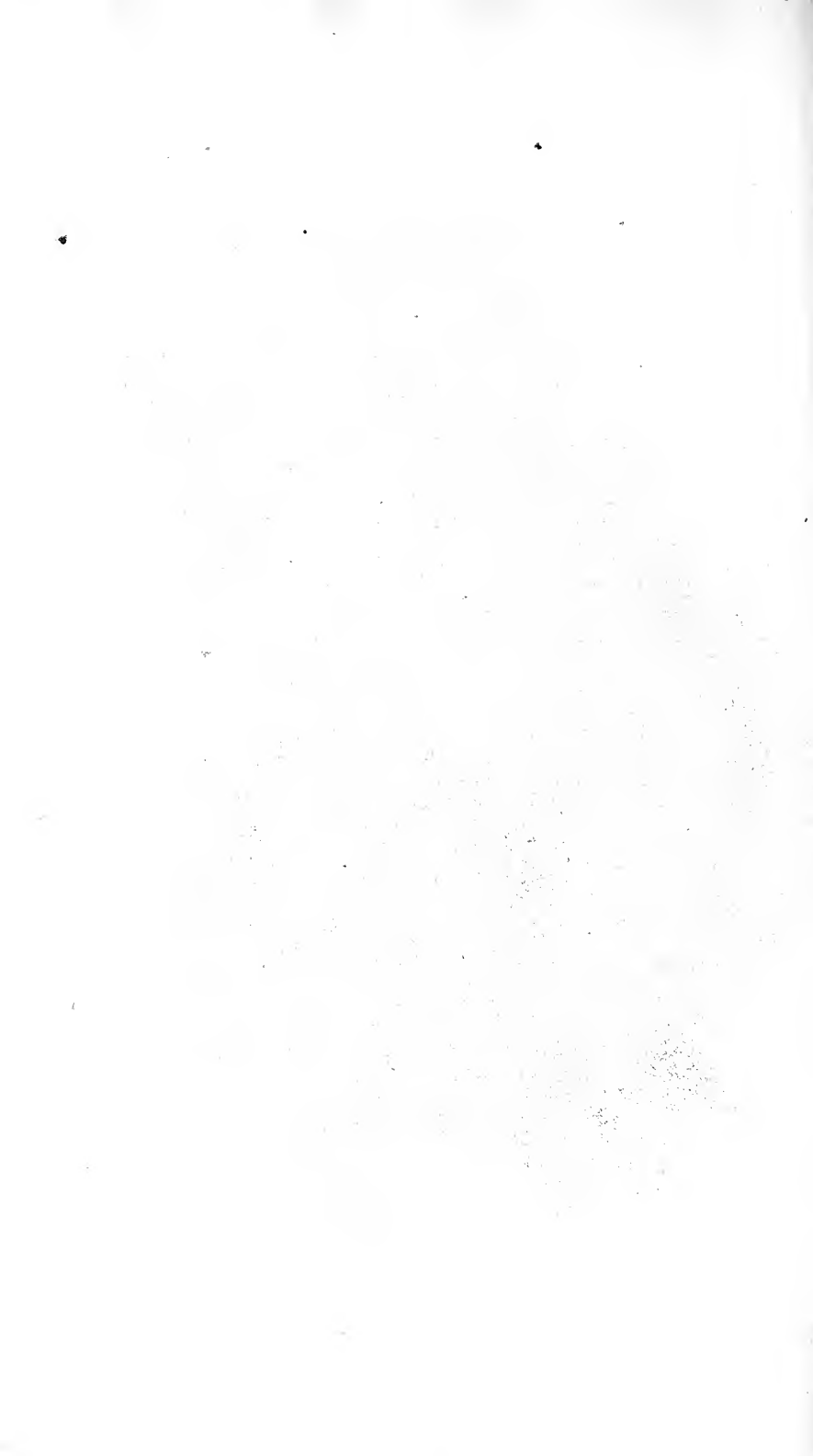
#### URSINE SLOTH.

THIS, which is by far the largest species of sloth, is a native of India, and has been but lately introduced to the knowledge of European naturalists. It was brought from the neighbourhood

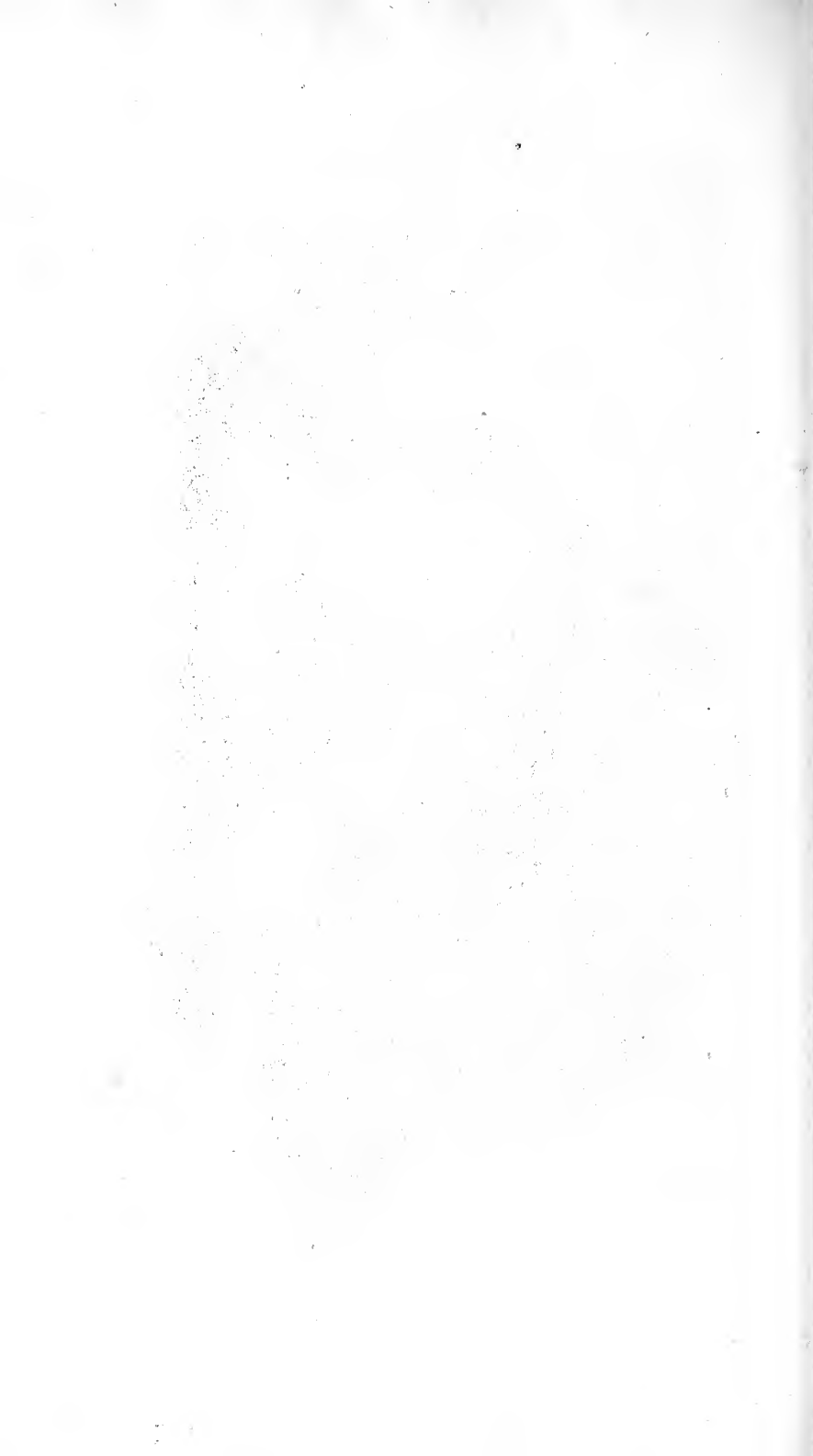
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TWO TOED SLOTH.









of Patna in Bengal. This animal has at first sight so much of the general aspect of a bear, that it has actually been considered as such by some observers ; but it is no otherwise related to the bear than by its size and habit, or mere exterior outline.

It is about the size of a bear, and is covered all over, except on the face, or rather the snout, which is bare and whitish, with long, shaggy, black hair ; which on the neck and back is much longer than elsewhere. On the fore part of the body the hair points forwards ; on the hinder part backwards. The eyes are very small ; the ears rather small, and partly hid in the long hair of the head. It is totally destitute of incisores or front teeth : in each jaw are two canine teeth of a moderate size ; those in the upper jaw are situated at the distance of two inches from each other ; those in the lower jaw are placed somewhat less remote. The grinders in the upper are three on each side ; of which the two most remote are double ; the remaining one simple. In the lower jaw, there are on each side six grinders, of which the most remote is simple, the two next double, and the three others simple. The tongue is smooth. The nose or snout is somewhat elongated ; it also appears as if furnished with a sort of transverse joint, or internal cartilage, which admits of a peculiar kind of motion in this part. The claws on the fore feet are five in number, and are excessively strong ; moderately crooked, and sharp-pointed ; those on the hind feet are shorter and inconspicuous.

The animal at the time this description was drawn up, was thought to be somewhat more than four years old. When first taken it is said to have been the size of a racoon, and to have sometimes barked in the manner of a dog. Its voice,

however, when examined as above, was a sort of short abrupt roar, which it uttered when much disturbed or irritated. It was a gentle and good-natured animal; it fed chiefly on vegetable substances and milk; was fond of apples, and did not willingly eat animal food, except of a very tender nature, as marrow, which it readily sucked from a bone presented to it. It was also delighted with honey, sugar, and other sweets. Its motions were not, as in the two former species, slow and languid, but moderately lively; and it appeared to have a habit of turning itself round and round every now and then as if for amusement, in the manner of a dog when lying down to sleep. It was said to have a propensity to burrow under the ground; and it was added that it had been dug out of its subterraneous retreat by those who first discovered it.

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### MEGATHERIUM AMERICANUM.

THIS is one of those animals which are supposed to be extinct, as no living individuals have yet been found belonging to this species. Its skeleton was discovered some years since, and is thus described by M. Cuvier:

“This skeleton is fossil. It was found a hundred feet beneath the surface of a sandy soil, in the vicinity of the river of La Plata. It only wants the tail, and some pair bones, which have been imitated in wood, and the skeleton is now mounted at Madrid.

“This skeleton is twelve feet (french) long, by six feet in height. The spine is composed of several cervical, sixteen dorsal, and four lumbar vertebræ: it has consequently sixteen ribs; the os

sacrum is short ; the ossa ilia very broad ; and their plane being almost perpendicular to the spine, they form a very open pelvis. There is no pubis or ischium, at least they are wanting in this skeleton, and there is no mark of their having existed when the animal was alive.

“ The thigh bones are excessively thick, and the leg bones still more so, in proportion. The entire sole of the foot bore on the ground in walking. The shoulder-blade is much broader than long. The clavicles are perfect ; and the two bones of the fore arm are distinct and moveable upon each other. The fore limbs are longer than the hind. To judge by the form of the last phalanxes, there must have been very large pointed claws on the fore feet, and a single one on the hind. The other toes seem to have been deprived of them, and, perhaps, entirely concealed beneath the skin.

“ The head is the greatest singularity of this skeleton. The occiput is elongated and flattened, but it is pretty convex above the eyes. The two jaws form a considerable projection, but without teeth, there being only four on each side, above and below, all grinders, with a flat crown, and grooved across. The breadth of the branches of the lower jaw, and the great apophysis placed on the base of the zygomatic arch, deserve particular notice.

“ This quadruped, in its characters taken together, differs from all known animals ; and each of its bones, considered apart, also differs from the corresponding bones of all known animals. This results from a detailed comparison of the skeleton with that of other animals, and will readily appear to those who are conversant in such researches, for none of the animals which approach it in bulk,

have either pointed claws, or similarly formed heads, shoulder-blades, clavicles, pelvis, or limbs."

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## ANT-EATER TRIBE.

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THE ant-eaters, living entirely on insects, have no teeth. Their tongue, which is long, wormlike, and covered with a kind of glutinous moisture, is the only instrument by which they seize their food. Instead of teeth they have, however, certain bones, not unlike teeth, that are situated deep in the mouth, near the entrance of the gullet. The mouths of the whole tribe are lengthened into a somewhat tubular form.

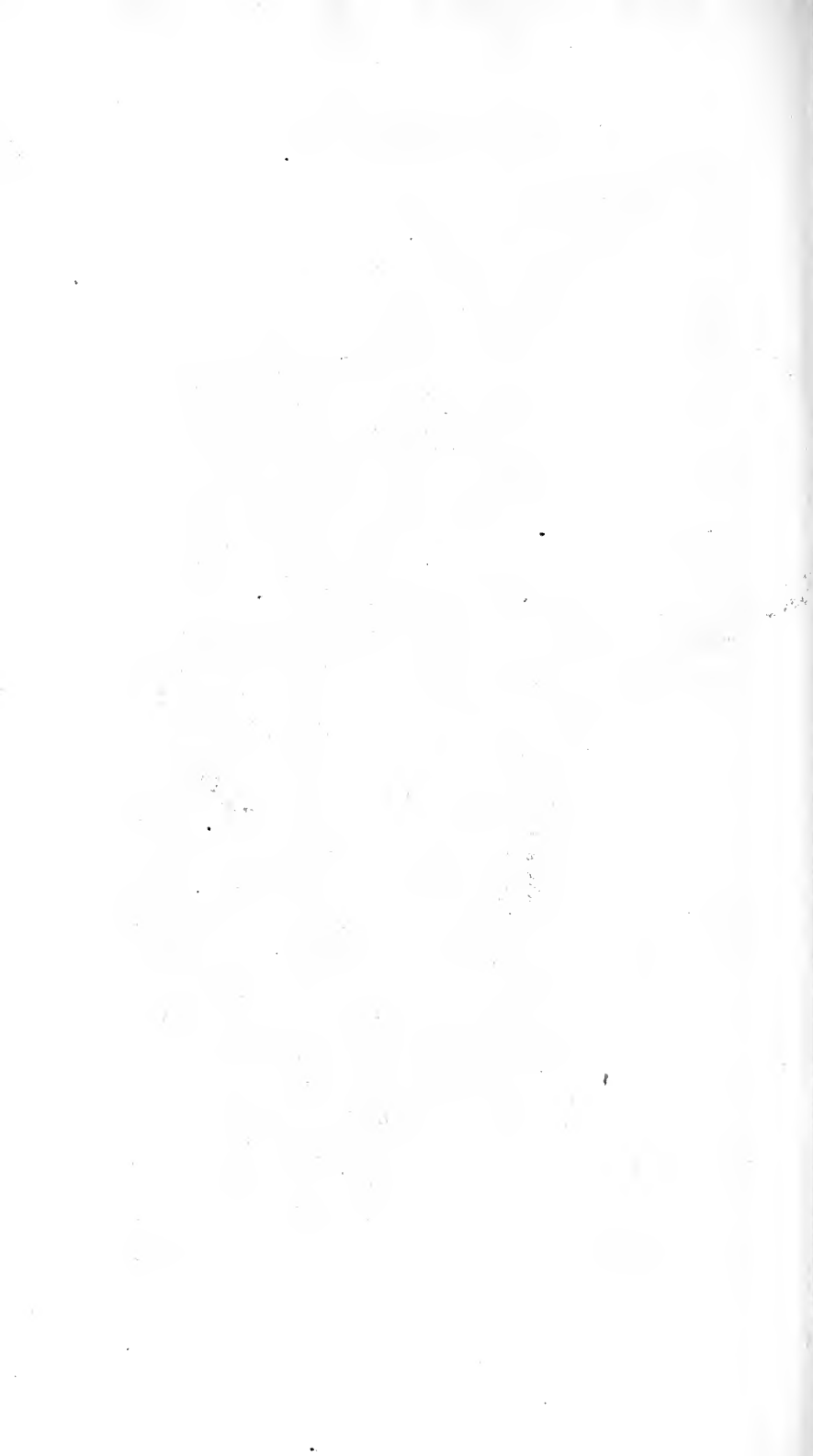
### GREAT ANT-EATER.

THIS is by far the largest of the ant-eaters, being upwards of seven feet in length, from the tip of the nose, to the end of the tail; to the root of the tail it is not more than about five feet and a half. It is an animal of an uncouth appearance; the head is small; the ears short and round; the shoulders thick and muscular, from whence the body tapers towards the tail; but the thighs are thick and short; the colour of the animal is a deep grey, with a very broad band of black running from the neck downwards, on each side the body, growing gradually narrower as it passes down; this black band is accompanied on the upper part, by a streak of white; the fore legs are of a lighter cast than the hinder; and

GREAT ANT EATER.

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have a patch of black in front, not much above the foot ; the tail is black, extremely long, and bushy ; the hair on the whole body, but especially on the tail, is very harsh and coarse ; there are four toes on the fore feet, and five on the hind ; the two middle claws on the fore feet are extremely large and strong ; which render this creature, though destitute of teeth, a very formidable adversary.

It may well be supposed that an animal so helpless as the ant-eater is, with legs too short to fit it for flight, and unprovided with teeth, to give it a power of resistance, is neither numerous, nor often seen ; its retreats are in the most barren and uncultivated part of South America. It is a native only of the new continent, and entirely unknown to the old. It lives chiefly in the woods, and hides itself under the fallen leaves. It seldom ventures from its retreat, and the industry of an hour supplies it with sufficient food for several days together. Its manner of procuring its prey, is one of the most singular in all natural history ; as its name implies, it lives entirely upon ants and insects ; these, in the countries where it is bred, are found in the greatest abundance, and often build themselves hills, five or six feet high, where they live in community. When this animal approaches an ant-hill, it creeps slowly forward on its belly, taking every precaution to keep itself concealed, till it comes within a proper distance of the place where it intends to make its banquet ; there lying closely along at its length, it thrusts forth its round red tongue, which is often two feet long, across the path of these busy insects, and there lets it lie motionless for several minutes together. The ants of that country, some of which are half an inch long, considering it as a piece of flesh accidentally thrown before them,

come forth and swarm upon it in great numbers, but wherever they touch, they stick ; for this instrument is covered with a slimy fluid, which, like bird-lime, entangles every creature that lights upon it. When, therefore, the ant-eater has found a sufficient number for one morsel, it instantly draws in the tongue, and devours them all in a moment ; after which it still continues in its position, practising the same arts until its hunger is entirely appeased ; it then retires to its hiding-place once more, where it continues in indolent existence, till again excited by the calls of hunger.

Such is the luxurious life of a creature, that seems of almost all others the most helpless and deformed. It finds safety in its hiding-places from its enemies, and an ample supply in some neighbouring ant-hill for all its appetites. As it only tries to avoid its pursuers, it is seldom discovered by them ; yet helpless as this animal is, when driven to an extremity, though without teeth, it will fight with its claws with great obstinacy. With these arms alone, it has often been found to oppose the dog, and even the jaguar. It throws itself upon its back, fastens upon its enemy with all its claws, sticks with great strength and perseverance, and even after killing its invader, which is sometimes the case, does not quit its hold, but remains fastened upon it with vindictive desperation. It sleeps in the day, and preys by night. Its flesh has a strong disagreeable taste ; but it is eaten by the Indians.

#### MIDDLE ANT-EATER

Has a long slender nose, bending a little down ; small black mouth and eyes ; and small upright ears. The bottoms of its fore feet are round, with four strong claws on each ; the hind feet have



five ; its hair is hard and shining, of a pale yellow brown ; dusky on the hind legs and the middle of the back. A black line on each side, from the neck, crosses the shoulders, passes along, and both meet at the lower end of the back. The tail, covered with longer hair than the back, tapers, and is bald at the end. This animal measures one foot seven, its tail ten inches. It inhabits the same country with the last, and resembles it in its manners. When it drinks, part spurts out of the nostrils. It climbs trees, and lays hold of the branches with its tail.

#### STRIPED ANT EATER

HAS a taper nose ; its upper mandible extends very far beyond the lower ; its eyes are exceedingly small ; ears round and short ; its tail is equally covered with long hairs ; it has five toes on each foot ; its body and tail are tawny ; the first marked downwards with broad stripes of black ; the last annulated ; its legs and nose are striped in the same manner ; its belly is of a dirty white. Length thirteen inches ; tail seven and a half. It is a native of Guiana.

#### LITTLE ANT EATER

HAS a conic nose, bending a little down ; small ears, hid in its fur ; two hooked claws on the fore feet, four on the hind. The whole animal is covered with long soft silky hair, or rather wool, of a yellowish brown colour. It is seven inches and a half long ; its tail, which is thick at the base, and tapers to a point, measures eight and a half, and is naked on the underside for the last four : it inhabits Guiana, and climbs trees in quest of

a species of ants which build their nests among the branches.

### THREE-TOED ANT EATER.

THIS is an obscure species described by Seba, and adopted by Linnæus. It is said to be a native of India. Dr. Shaw supposes it to be a variety of the middle ant eater.

### CAPE ANT EATER.

THE Cape ant eater is a large animal, measuring about three feet and a half from the tip of the nose to the beginning of the tail ; and the tail measures one foot nine inches. The general colour of the animal is grey, or like that of a rabbit, but deeper, and tinged with reddish on the sides and belly ; the legs are blackish ; the head is of a conic shape ; the nose long, and somewhat abruptly blunt at the end, like that of a hog ; the tongue is very long, flat, and slender ; the ears about six inches long ; upright (in the dried specimen) and extremely thin ; they are also thinly scattered over with fine hairs ; the hair on the head and upper parts is short, and lies close or smooth as if glued to the skin ; it is longest and loosest on the sides and legs ; the tail is thick at the base, and gradually tapers to a point. The fore feet have four toes ; the hind ones five ; and the claws on all the feet are very strong. This species inhabits the neighbourhood of the Cape of Good Hope, where it lives underground, and is called by the name of the ground hog. It feeds principally on ants. It is said to be often hunted out of its retreats by the Hottentots, who consider it as good food.

—CAPM ANT EATER

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ACULEBATIA



## ACULEATED, OR PORCUPINE ANT EATER.

THE aculeated ant eater is one of those curious animals, which have been lately discovered in New Holland; and is a striking instance of that beautiful gradation, so frequently observed in the animal kingdom, by which creatures of one tribe or genus approach to those of a very different one, as it forms a connecting link between the very distant genera of porcupine and ant eater.

This animal, so far as may be judged from the specimens hitherto imported, is about a foot in length. The whole upper parts of the body and tail are thickly coated with strong and very sharp spines, of a considerable length, and perfectly resembling those of a porcupine, except that they are thicker in proportion to their length; and that, instead of being encircled or annulated with several alternate rings of black and white, as in that animal, they are mostly of a yellowish white, with black tips; the colour extending to some little distance on the quill, and being separated from the white part by a circle of dull orange: others have but a very slight appearance of black towards the tips. The head, legs, and whole under parts of the body, are of a deep brown, or sable, and are thickly covered with strong, close-set, bristly hair. The tail is extremely short, slightly flattened at the tip, and coated on the upper part of the base with spines, at least equal in length to those of the back, and pointing perpendicularly upwards. The snout is long and tubular, and perfectly resembles that of the great ant eater, having only a very small opening at the tip, from whence is protruded a long wormlike tongue, as in other ant eaters. The nostrils are small, and seated at the extre-

mity of the snout. The eyes are very small, and black, with a pale blue iris. The legs are very short and thick, and are each furnished with five rounded broad toes ; on the fore feet are five very strong, long, and blunt black claws ; on the hind feet are only four claws ; the thumb, which is broader than the rest of the toes, being destitute of a claw ; the first claw on the hind foot is extremely long, somewhat curved, and sharp-pointed ; the next rather shorter, but of similar appearance ; the two remaining ones far shorter, very slightly curved, and not sharp-pointed.

In its mode of life, this animal resembles the rest of the ant eaters, being generally found in the midst of some large ant-hill. It burrows with great strength and celerity underground when disturbed ; its feet and legs being excessively strong and short, and wonderfully adapted to this purpose. It will even burrow under a pretty strong pavement, removing the stones with its claws, or under the bottom of a wall. During these exertions, its body is lengthened to an unusual degree.

#### MANIS.

THIS genus has the back, sides, and upper part of the tail, covered with large, strong, scales ; a small mouth, a long tongue, and no teeth.

The manis has been usually called the scaly lizard ; but, as M. Buffon very judiciously observes, the calling it a lizard is apt to produce error, and occasion its being confounded with an animal which it resembles only in its general form, and in its being covered with scales. The lizard may be considered as a reptile, produced from an egg ; the manis is a quadruped, and brought

forth alive, and perfectly formed. The lizard is all over covered with the marks of scales ; the manis has scales neither on the throat, the breast, nor the belly. The scales of the lizard seem stuck upon the body even closer than those of fishes ; the scales of the manis are only fixed at one end, and capable of being erected, like those of the porcupine, at the will of the animal. The lizard is a defenceless creature ; the manis can roll itself into a ball, like the hedgehog, and presents the points of its scales to the enemy, which effectually defend it.

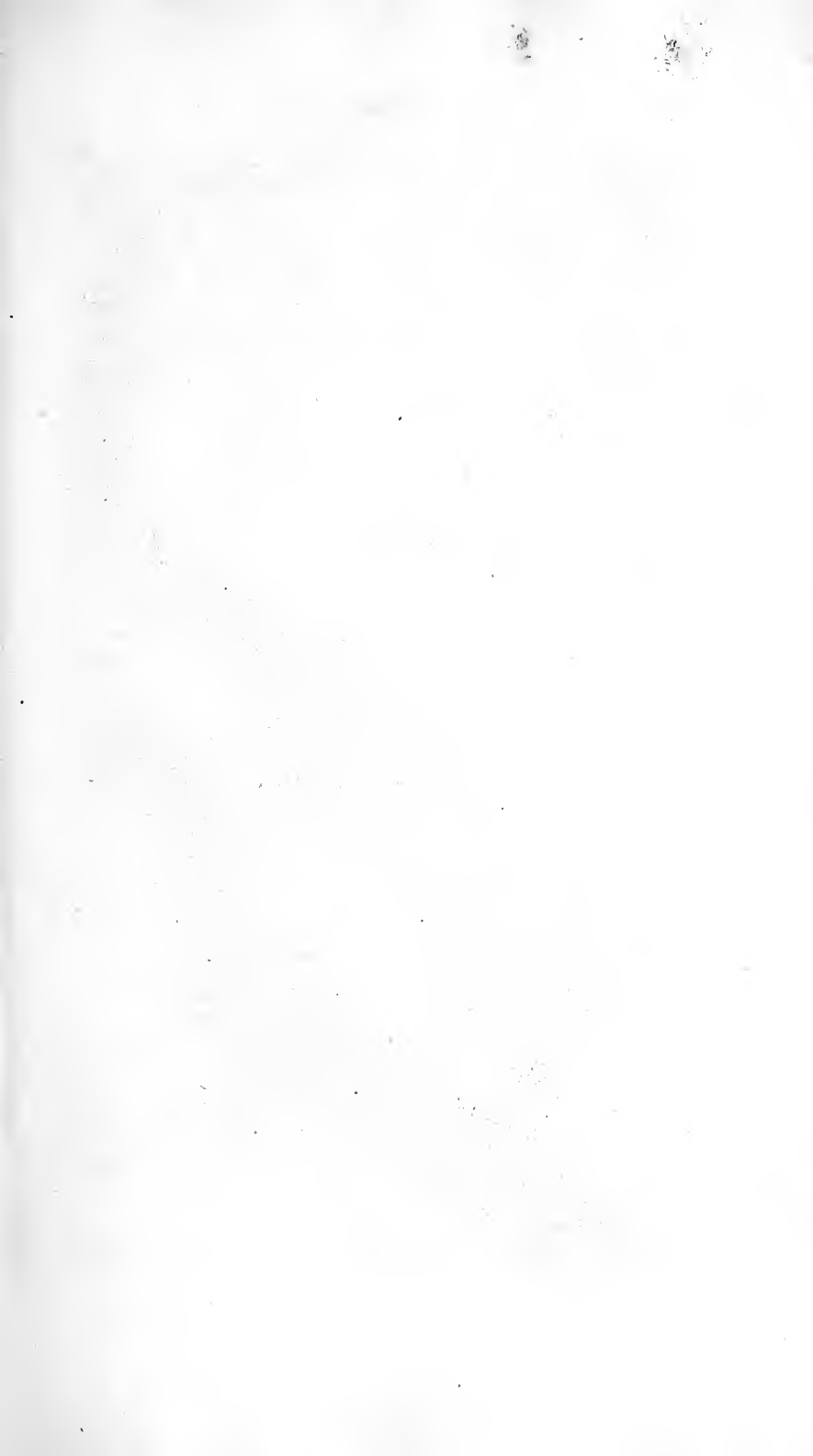
The manis, which is a native of the torrid climates of the antient continent, is, of all other animals, the best protected from external injury by nature. It has no teeth, but is armed with five toes on each foot, with long white claws. But what it is chiefly distinguished by, is its scaly covering, which, in some measure, hides all the proportions of its body. These scales defend the animal on all parts, except the under part of the head and neck, under the shoulders, the breast, the belly, and the inner side of the legs ; all which parts are covered with a smooth soft skin, without hair. Between the shells of this animal, at all the interstices, are seen hairs like bristles, brown at the extremity, and yellow towards the root. The scales of this extraordinary creature are of different sizes and different forms, and stuck upon the body somewhat like the leaves of an artichoke. The largest are found near the tail, which is covered with them like the rest of the body. These are above three inches broad, and about two inches long, thick in the middle and sharp at the edges, and terminated in a roundish point. They are extremely hard, and their substance resembles that of horn. They are convexed on the outside, and a little concave on the inner ; one edge sticks

in the skin, while the other laps over that immediately behind it. Those that cover the tail conform to the shape of that part, being of a dusky brown colour, and so hard, when the animal has acquired its full growth, as to turn a musket ball.

Thus armed, this animal fears nothing from the efforts of all other creatures, except man. The instant it perceives the approach of an enemy, it rolls itself up like the hedge-hog, and presents no part but the cutting edges of its scales to the assailant. Its long tail, which, at first view, might be thought easily separable, serves still more to increase the animal's security. This is lapped round the rest of the body, and, being defended with shells even more cutting than any other part, the creature continues in perfect security. Its shells are so large, so thick, and so pointed, that they repel every animal of prey; they make a coat of armour that wounds while it resists, and at once protects and threatens. The most cruel, the most famished quadrupeds of the forest, the tiger, the panther, and the hyæna, make vain attempts to force it. They tread upon, they roll it about, but all to no purpose; the manis remains safe within, while its invader almost always feels the reward of its rashness. The fox often destroys the hedge-hog by pressing it with his weight, and thus obliges it to put forth its nose, which he instantly seizes, and soon after the whole body; but the scales of the manis effectually support it under any such weight, while nothing that the strongest animals are capable of doing can compel it to surrender. Man alone seems furnished with arms to conquer its obstinacy. The negroes of Africa, when they find it, beat it to death with clubs, and consider its flesh as a very great delicacy.

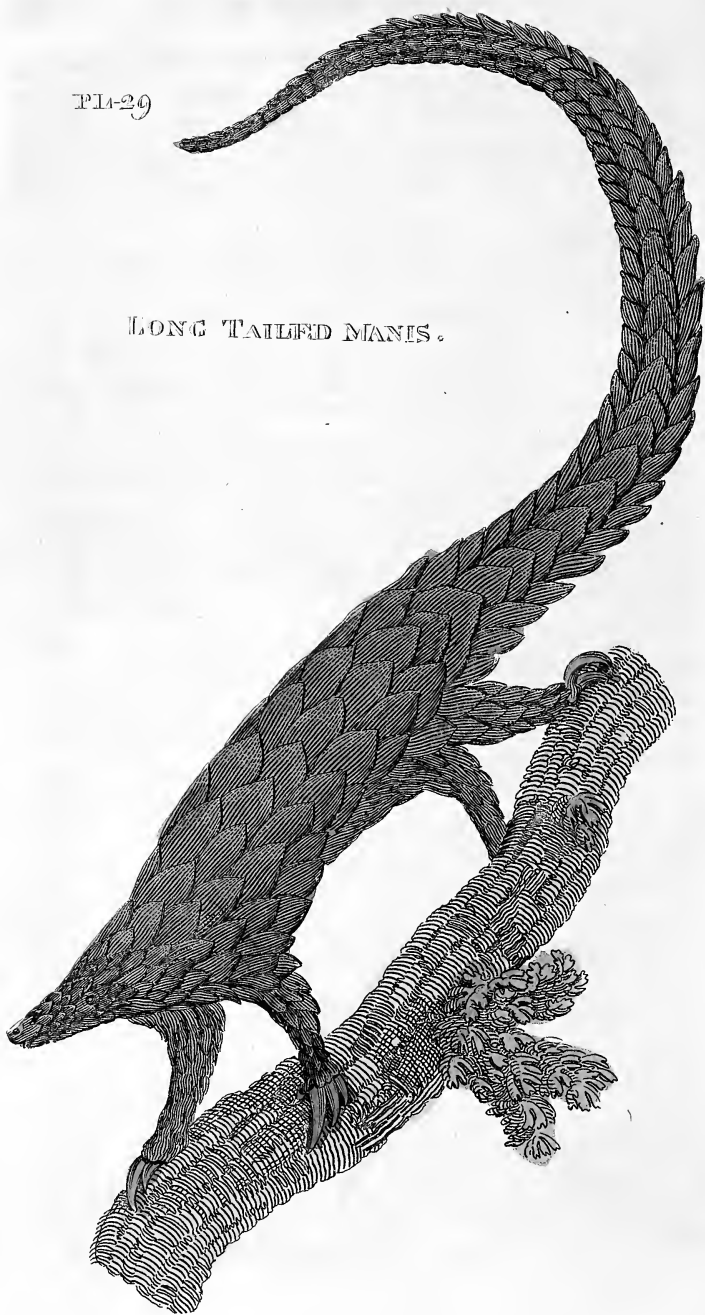
But, although this animal be so formidable in





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LONG TAILED MANIS.



its appearance, there cannot be a more harmless, inoffensive creature when unmolested. It is even unqualified by nature to injure larger animals, if it had the disposition, for it has no teeth. It should seem that the bony matter, which goes in other animals to supply the teeth, is exhausted in this in supplying the scales that go to the covering of its body. However this be, its life seems correspondent to its peculiar conformation. Incapable of being carnivorous, since it has no teeth, or of subsisting on vegetables, which require much chewing, it lives entirely upon insects, which it catches in a similar manner to other ant eaters. It is against these noxious insects, therefore, that its only force or cunning is exerted ; and were the negroes but sufficiently sensible of its utility in destroying one of the greatest pests to their country, they would not be so eager to kill it. But it is the nature of savage men to pursue the immediate good, without being solicitous about the more distant benefit they remove. They, therefore, hunt this animal with the utmost avidity for its flesh ; and as it is slow and unable to escape in an open place, they seldom fail of destroying it. However, it chiefly keeps in the most obscure parts of the forest, and digs itself a retreat in the clefts of rocks, where it brings forth its young, so that it is but rarely met with, and continues an extraordinary instance of the varying of nature.

#### LONG-TAILED MANIS, OR PHATAGIN

HAS a slender nose ; both its nose and head are smooth ; its body, legs, and tail, are guarded by long, sharp-pointed, striated scales ; its throat and belly are covered with hair ; its legs are short, with four claws on each foot, one of which is very small ; its tail tapers, but ends blunt. Guinea

## 102 SHORT-TAILED MANIS, AND ARMADILLO.

is supposed to be their native country. They grow to a great length. One preserved in the museum of the Royal Society, London, measured from the nose to the tail only fourteen inches; but the tail itself a yard and half a quarter.

### SHORT-TAILED MANIS, OR PANGOLIN

HAS blunt scales, with bristles between them; five toes on each foot; a tail longer than the body; and ears not unlike those of the human body. It inhabits Formosa, and other islands of India; feeds on lizards and insects; turns up the ground with its nose; snorts; grows very fat, and is esteemed very delicate eating.

Mr Pennant thinks that this may also be the species of animal, which, Des Marchais says, grows to the length of eight feet, of which the tail is four. It lives in woods and marshy places in Guinea; feeds on ants and insects, which it takes by laying its long tongue, covered with a glutinous saliva, across their path. It walks very slowly, and would be the prey of every ravenous beast, had it not the power of rolling itself up, and opposing to its enemy a formidable row of erected scales. In vain does even the leopard attack it with his vast claws; for at last he is obliged to leave it in safety. It is said to destroy the elephant by twisting itself round his trunk, and compressing it with its hard scales. The negroes reckon its flesh excellent.

The broad-tailed manis is supposed to be a variety either of this or the former species.

### ARMADILLO.

THE armadillo is chiefly an inhabitant of South America; a peaceful, harmless creature, incapable

of offending any other quadruped, and furnished with a peculiar covering for its own defence. The manis, described above, seems an inactive, helpless being, indebted for safety more to its patience than its power ; but the armadillo is still more exposed and helpless. The manis is furnished with an armour that wounds while it resists, and that is never attacked with impunity ; but the armadillo is obliged to submit to every insult, without any power of repelling its enemy ; it is attacked without danger, and is consequently liable to more various persecutions.

This animal being covered, like a tortoise, with a shell, or rather a number of shells, its other proportions are not easily discerned. It appears, at first view, a round misshapen mass, with a long head, and a very large tail sticking out at either end, as if not of a piece with the rest of the body. It is of different sizes, from a foot to three feet long, and covered with a shell divided into several pieces, that lap over each other like the plates in a coat of armour, or in the tail of a lobster. The difference in the size of this animal, and also the different disposition and number of its plates, have been considered as constituting so many species, each marked with its own particular name. In all, however, the animal is partially covered with this natural coat of mail ; the conformation of which affords one of the most striking curiosities in natural history. This shell, which in every respect resembles a bony substance, covers the head, the neck, the back, the sides, the rump, and the tail to the very point. The only parts to which it does not extend, are the throat, the breast, and the belly, which are covered with a white soft skin, somewhat resembling that of a fowl stripped of its feathers. If these naked parts be observed with attention, they will be found covered with the rudiments of shells,

of the same substance with those which cover the back. The skin, even in the parts that are softest, seems to have a tendency to ossify; but a complete ossification takes place only on those parts which have the least friction, and are the most exposed to the weather. The shell, which covers the upper part of the body, differs from that of the tortoise, in being composed of more pieces than one, which lie in bands over the body, and, as in the tail of the lobster, slide over each other, and are connected by a yellow membrane in the same manner. By this means the animal has a motion in its back, and the armour gives way to its necessary inflections. These bands are of various numbers and sizes, and from them these animals have been distinguished into various kinds. These shells are differently coloured in different kinds, but most usually they are of a dirty grey. This colour, in all, arises from another peculiar circumstance in their conformation, for the shell itself is covered with a softish skin, which is smooth and transparent.

But, although these shells might easily defend this animal from a feeble enemy, yet they could make but a slight resistance against a more powerful antagonist. Nature, therefore, has given the armadillo the same method of protecting itself with the hedge-hog or the manis. The instant it perceives itself attacked, it withdraws the head under its shells, and lets nothing be seen but the tip of the nose; if the danger increase, the animal's precautions increase in proportion; it then tucks up its feet under its belly, unites its two extremities together, while the tail seems as a band to strengthen the connection; and it thus becomes like a ball, a little flattish on each side. In this position it continues obstinately fixed, while the danger is near, and often long after it is over. In this

situation it is tossed about at the pleasure of every other quadruped, and very little resembling a creature endowed with life and motion. Whenever the Indians take it, which is in this form, by laying it close to the fire, they soon oblige the poor animal to unfold itself, and to face a milder death to escape a more severe.

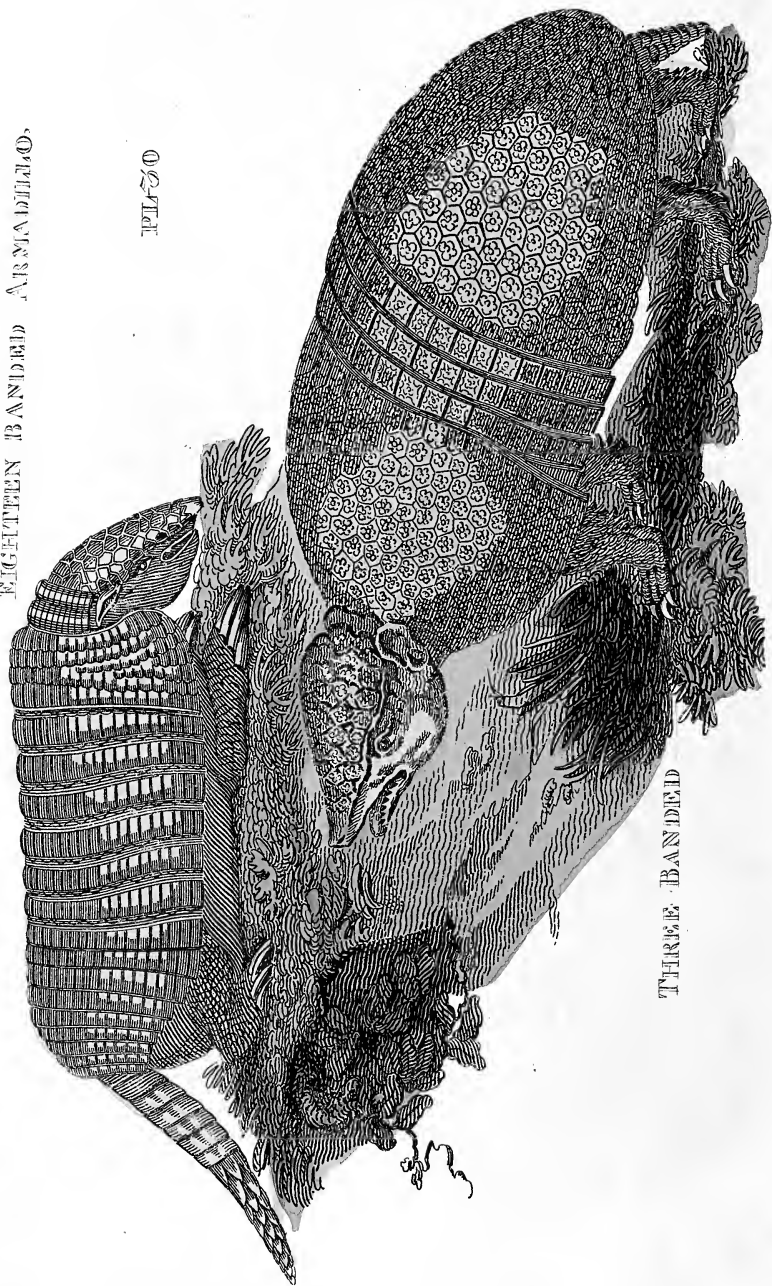
This animal is a native only of America, for they were utterly unknown before the discovery of that continent. It is an inoffensive, harmless creature, unless it finds the way into a garden, where it does a great deal of mischief, by eating the melons, the potatoes, and other vegetables. Although a native of the warmest parts of America, yet it bears the cold of our climate without any inconvenience. They are often shown among other wild beasts, which is a proof they are not difficult to be brought over. Their motion seems to be a swift walk, but they can neither run, leap, nor climb trees ; so that, if found in an open place, they have no method of escaping from their pursuers. Their only resource in such an extremity is to make towards their hole as fast as they can ; or, if this be impracticable, to make a new hole before the enemy arrives. For this they require but a very few moments advantage ; the mole itself does not burrow swifter than they can. For this purpose, they are furnished with claws extremely large, strong, and crooked, and usually four upon each foot. They are sometimes caught by the tail as they are making their way into the earth ; but such is their resistance, and so difficult is it to draw them backward, that they leave their tail in the hand of their pursuer, and are very well contented to save their lives with its loss. The pursuers, sensible of this, never drag the tail with all their force, but hold it while another digs the ground about them, and thus these ani-

mals are taken alive. The instant the armadillo perceives itself in the power of its enemies, it has but one last resource, to roll itself up, and thus patiently wait whatever tortures they think proper to inflict. The flesh of the smaller kinds is said to be delicate eating ; so that we may suppose they receive no mercy. For this reason they are pursued with unceasing industry ; and, although they burrow very deep in the earth, there have been many expedients used to force them out. The hunters sometimes contrive to fill the hole with smoke, which is often successful ; they at other times force it by pouring in water. They also bring up a small kind of dogs to the chase, that quickly overtake them, if at any distance from their burrow, and oblige them to roll themselves up in a ball, in which figure the hunters carry them home. If, however, the armadillo be near a precipice, it often escapes by rolling itself up, and then tumbling down from rock to rock, without the least danger or inconvenience. They are sometimes taken in snares laid for them by the sides of rivers and low moist places, which they particularly frequent ; and this method, in general, succeeds better than any of the former, as their burrows are very deep, and they seldom stir out except in the night. At no time are they found at any great distance from their retreats, so that it requires some patience and skill to intercept their retreat.

There are scarce any of these that do not root the ground like a hog, in search of such roots as make a principal part of their food. They live also upon melons and other succulent vegetables, and all will eat flesh when they can get it. They frequent water and watery places, where they feed upon worms, small fish, and water insects. It is pretended that there is a kind of friendship







between them and the rattle-snake, that they live peaceably and commodiously together, and are frequently found in the same hole. This, however, may be a friendship of necessity to the armadillo; the rattle-snake takes possession of its retreats, which neither are willing to quit, while each is incapable of injuring the other.

The armadillos have several grinders, but neither cutting nor canine teeth.

### THREE-BANDED ARMADILLO.

THIS may be considered, perhaps as the most elegant of the whole genus, the pattern of the armour being peculiarly neat, and well defined; and the colour of the animal more pleasing than in most other species, viz. a clear yellowish white. The head, shoulders, and hind part of the body, are coated with regular hexagonal divisions, curiously studded, or tuberculated on the surface; and the zones of the body are extremely distinct, and only three in number; they are divided or marked into numerous transverse segments, or squares; the tail is very thick and short. The legs are covered with hexagonal divisions, or segments, similar to those on the shoulder, but smaller; the ears are rather larger, and the claws smaller than in most other species. It is a native of Brasil.

### SIX-BANDED ARMADILLO

HAS its crust formed of angular pieces, with some scattered hairs between. Its tail, which is short in proportion to the body, is very thick at the base, and tapers to a point. It has five toes on each foot, and inhabits Brasil and Guinea.

## NINE-BANDED ARMADILLO

HAS long, upright ears ; four toes on the forefeet, five on the hind ; is three feet long ; and the tail, which tapers, is longer than in any other species. Its crust is marked with six-sided figures ; its bands with wedge-like marks across. One, brought some years ago to England from the Musquito shore, was fed with raw beef and milk, but refused grain and fruit ; though this genus wants, as has already been observed, both cutting and canine teeth.

## TWELVE-BANDED ARMADILLO

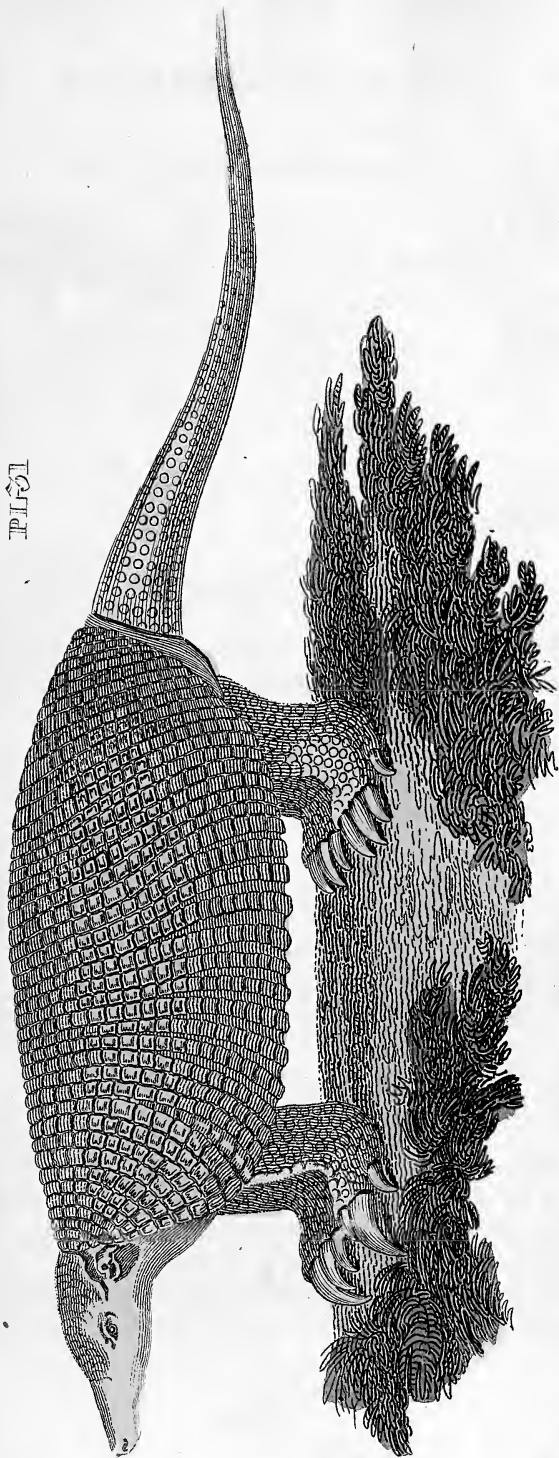
HAS broad, upright ears. The crust on its shoulder consists of oblong pieces ; that of the rump of six sided pieces : it has five toes on each foot ; those of the fore feet have very large claws. Its tail is shorter than the body, and is said to have no crustaceous covering.

## EIGHTEEN-BANDED ARMADILLO

HAS a very slender weasel-looking head, and small erect ears. The crust on its shoulders and rump consists of square pieces. It has five toes on each foot ; is about fifteen inches long ; its tail only five and a half.

It is necessary to observe, that the different species of armadillos have not always that exact number of bands, from which they derive their specific name. There are seven-banded, and eight-banded armadillo's, which are considered as varieties of the nine-banded species. There is another kind which have eight bands, which are believed to be a variety of the six-banded species.

PLATE



TWELVE BANDED ARMADILLO.







RHINOCEROS



Several other varieties of armadillos are obscurely described, but as this animal lives chiefly in retired situations, it is very probable that other species of it may exist.

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## RHINOCEROS TRIBE.

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WE now come to a race of animals of huge size and bulk, inhabitants only of the tropical climates. They are dull and sluggish in their manners, but in their disposition sufficiently peaceable, except when attacked or provoked. They have on the nose a solid, conical horn, not fixed in the bone ; this is never shed, but remains, unless broken off by accident, during life. Their skin is tuberculated and hard, but on the under parts of the body sufficiently tender to be cut through with a knife. The general internal structure of the animals of this tribe corresponds with what is observed in the horse.

### SINGLE-HORNED RHINOCEROS.

THE single horned rhinoceros is not exceeded in size by any land animal except the elephant, and in strength and power it gives place to none. Its height is eight feet, and its length is usually about twelve feet, and this is also nearly the girth of its body.

Its nose is armed with a formidable weapon, a hard and very solid horn, sometimes above three feet in length, and eighteen inches in circumference at the base, with which it is able to defend itself

against the attacks of every ferocious animal. The tiger will rather attack the elephant than the rhinoceros, which it cannot face without danger of having its bowels torn out. "With this horn," says Martial, "it will lift up a bull like a football."

The upper lip is disproportionately large ; hanging over the lower, and terminating in a point. It is furnished with muscles, which enable the animal to move it with great dexterity in collecting his food, and introducing it into the mouth. The nostrils are in a transverse direction. The ears are rather large, erect, and pointed. The skin is naked, rough, and extremely thick. About the neck it is gathered into enormous folds ; a fold extends between the shoulders and the fore legs ; and another from the hinder part of the back to the thighs. The tail is slender, flat at the end, and covered on the sides with very stiff, black hairs. In consequence of the vast bulk of the body, and the disproportionate shortness of the legs, the belly hangs low. The breadth of the feet does not much exceed the circumference of the legs.

The body and limbs of the rhinoceros are defended by a skin so hard as to be impenetrable, except in the belly, by either a knife or spear. It is said, that even to shoot a full-grown rhinoceros of an advanced age, it is necessary to make use of iron bullets, those of lead having been known to flatten against the skin.

Dr. Parsons, in the year 1743, published a history of the rhinoceros, containing a very minute description of one that was brought from Bengal into Europe. He was only two years old, and the expence of his food and journey amounted to near one thousand pounds sterling. He had every day, at three meals, seven pounds of rice, mixed with

three pounds of sugar, besides hay and green plants; he also drank large quantities of water. In his disposition he was very peaceable, readily suffering all parts of his body to be touched. When he was hungry, or was struck by any person, he became mischievous, and nothing would appease him but food. He was not at this time taller than a young cow.

A rhinoceros brought from Atcham, in the dominions of the King of Ava, was exhibited in 1748, at Paris. It was very tame, gentle, and even caressing; was fed principally on hay and corn, and was much delighted with sharp or prickly plants, and the thorny branches of trees. The attendants frequently gave him branches that had very sharp and strong thorns on them; but he bent and broke them in his mouth without seeming in the least incommoded. It is true they sometimes drew blood from the mouth and tongue, "but that," says father Le Comte, who gives us the description, "might even render them more palatable, and those little wounds might serve only to cause a sensation similar to that excited by salt, pepper, or mustard, on ours."

As an equivalent for a very dull sight, Dr. Parsons remarks, that this animal has an acute and most attentive ear. It will listen with a deep and long continued attention to any kind of noise; and although it be eating, lying down, or obeying any pressing demands of nature, it will raise its head, and listen till the noise ceases.

The rhinoceros is said to run with great swiftness, and from his strength and impenetrable covering, is capable of rushing with resistless violence through woods and obstacles of every kind; the smaller trees bending like twigs as he passes them. In his general habits and manner of feeding he resembles the elephant; residing in

cool sequestered spots, near waters, and in shady woods. Like the hog, he delights in occasionally wallowing in the mire.

The Asiatics sometimes tame and bring these animals into the field of battle, to strike terror into their enemies. They are, however, in general so unmanageable, that they do more harm than good ; and in their fury it is not uncommon for them to turn on their masters.

The flesh is eaten by the inhabitants of the country. The skin, flesh, hoofs, teeth, and even the dung, are also used medicinally. The horn, when cut through the middle, is said to exhibit on each side, the rude figure of a man ; the outlines being marked by small white strokes. Many of the Indian princes drink out of cups made of this horn ; imagining, that when these hold any poisonous draught, the liquor will ferment till it runs quite over the top. Goblets made of the horns of the young, are esteemed the most valuable. Professor Thunberg, when at the Cape, tried these horns, both wrought into goblets and unwrought, both old and young horns, with several sorts of poison, weak as well as strong, but did not observe the least motion, or effervescence ; when, however, a solution of corrosive sublimate was poured into one of them, there arose indeed a few bubbles, which were produced by the air that had been inclosed in the pores of the horn, and was now disengaged from it. Martial informs us, that the Roman ladies of fashion used these horns in the baths to hold their essence bottles and oils. The Javanese make shields of the skin.

The single horned rhinoceros is a native of several parts of India, as well as of the islands of Ceylon, Java, and Sumatra. It is also found in Ethiopia. The female produces only one young one at a birth.



TWO HORNED RHINOCEROS.

PLATE



## TWO-HORNED RHINOCEROS.

THIS species differs from the last, in the appearance of its skin ; which, instead of vast and regularly marked armour-like folds, has merely a very slight wrinkle across the shoulders and on the hinder parts, with a few fainter wrinkles on the sides ; so that, in comparison with the common rhinoceros, it appears almost smooth. What, however, constitutes the principal distinction, is the nose being furnished with two horns, one of which is smaller than the other, and situated above it. These horns are said to be loose when the animal is in a quiet state, but to become firm and immoveable when he is enraged.

In its habits and manner of feeding, this differs but little from the single-horned rhinoceros. Le Vaillant says, that when these animals are at rest, they always place themselves in the direction of the wind, with their noses towards it, in order to discover by their smell the approach of any enemies. From time to time, however, they move their heads round to look behind them, and to be assured that they are safe on all sides ; but they soon return to their former position. When they are irritated they tear up the ground with their horn ; throwing the earth and stones furiously, and to a vast distance, over their heads.

Mr. Bruce's description of the manners of the two-horned rhinoceros, is deserving of particular notice. He informs us that, " besides the trees capable of most resistance, there are, in the vast forests within the rains, trees of a softer consistence, and of a very succulent quality, which seem to be destined for the principal food of this animal. For the purpose of gaining the highest branches of these, his upper lip is capable of

being lengthened out so as to increase his power of laying hold with it, in the same manner as the elephant does with his trunk. With this lip, and the assistance of his tongue, he pulls down the upper branches, which have most leaves, and these he devours first. Having stripped the tree of its branches, he does not immediately abandon it ; but placing his snout as low in the trunk as he finds his horns will enter, he rips up the body of the tree, and reduces it to thin pieces like so many laths ; and when he has thus prepared it, he embraces as much of it as he can in his monstrous jaws, and twists it round with as much ease as an ox would do a root of celery, or any small plant.

“ When pursued, and in fear, he possesses an astonishing degree of swiftness, considering his size, the apparent unwieldiness of his body, his great weight before, and the shortness of his legs. He has a kind of trot, which, after a few minutes, increases in a great proportion, and takes in a great distance ; but this is to be understood with a degree of moderation. It is not true that in a plain he beats the horse in swiftness. I have passed him with ease, and seen many worse mounted do the same ; and though it is certainly true that a horse can very seldom come up with him, this is owing to his cunning, and not to his swiftness. He makes constantly from wood to wood, and forces himself into the thickest parts of them. The trees that are dead or dry, are broken down as with a cannon shot, and fall behind him and on his sides in all directions. Others that are more pliable, greener, or fuller of sap, are bent back by his weight, and the velocity of his motions. And after he has passed, restoring themselves like a green branch to their natural position, they often sweep the incautious pursuer and



his horse from the ground, and dash them in pieces against the surrounding trees.

“ The eyes of the rhinoceros are very small ; he seldom turns his head, and therefore sees nothing but what is before him. To this he owes his death, and never escapes if there is so much plain as to enable the horse to get before him. His pride and fury then make him lay aside all thoughts of escaping, but by victory over his enemy. He stands for a moment at bay : then, at a start, runs straight forward at the horse, like the wild boar, which, in his manner of action, he very much resembles. The horse easily avoids him by turning short to one side ; and this is the fatal instant : the naked man, with the sword, drops from behind the principal horseman, and, unseen by the rhinoceros, who is seeking his enemy, the horse, he gives him a stroke across the tendon of the heel, which renders him incapable of further flight or resistance.

“ In speaking of the great quantity of food necessary to support this enormous mass, we must likewise consider the vast quantity of water which he needs. No country but that of Shangalla, which he possesses, deluged with six months rain, and full of large and deep basins, made in the living rock, and shaded by dark woods from evaporation, or watered by large and deep rivers, which never fall low or to a state of dryness, can supply the vast draughts of this monstrous creature ; but it is not for drinking alone that he frequents wet and marshy places ; large, fierce, and strong as he is, he must submit to prepare himself against the weakest of his adversaries. The great consumption he constantly makes of food and water, necessarily confines him to certain limited spaces ; for it is not every place that can maintain him ; he cannot emigrate or seek his defence among the sands of

Atbara," His adversary is a fly (probably of the Linnæan genus *æstrus*) which is bred in the black earth of the marshes. It persecutes him so unremittingly, that it would in a short time subdue him, but for a stratagem which he practises for his preservation. In the night when the fly is at rest, the rhinoceros chuses a convenient place, and there rolling in the mud, clothes himself with a kind of case, which defends him against his adversary the following day. The wrinkles and plaits of his skin serve to keep this muddy plaister firm upon him, all but about his hips, shoulders, and legs, where it cracks and falls off by motion, and leaves him exposed in those parts to the attacks of the fly. The itching and pain which follow, occasion him to rub himself in those parts against the roughest trees ; and this is one cause of the numerous pustules or tubercles that we see upon him.

He enjoys so much the rubbing himself, that he groans and grunts so loud during this action, as to be heard at a considerable distance. The pleasure he receives from this employment, and the darkness of the night deprive him of his usual vigilance and attention. The hunters guided by his noise, steal secretly upon him ; and while lying on the ground, wound him with their javelins, mostly in the belly, where the wound is mortal.

It is by no means true that the skin of this rhinoceros, as it has been often represented, is hard or impenetrable like a board. In his wild state he is slain by javelins thrown from the hand, some of which enter his body to a great depth. A musket shot will go through him, unless interrupted by a bone ; and the Shangalla, an Abyssinian tribe, kill him by the clumsiest arrows that ever were used by any people practising that weapon, and cut him in pieces afterwards with the very worst of knives.

In order to afford some idea of the enormous strength of the rhinoceros, even after being severely wounded, I shall quote Mr. Bruce's account of the hunting of this animal in Abyssinia: "We were on horseback (says this gentleman) by the dawn of day, in search of the rhinoceros, many of which we had heard making a very deep groan and cry as the morning approached; several of the Agageers (hunters) then joined us: and after we had searched about an hour in the very thickest part of the wood, one of them rushed out with great violence, crossing the plain towards a wood of canes that was about two miles distant. But though he ran, or rather trotted with surprising speed, considering his bulk, he was, in a very little time, transfixed with thirty or forty javelins; which so confounded him, that he left his purpose of going to the wood, and ran into a deep hole, ditch, or ravine, a *cul de sac*, without outlet, breaking above a dozen of the javelins as he entered. Here we thought he was caught as in a trap, for he had scarcely room to turn; when a servant, who had a gun, standing directly over him, fired at his head, and the animal fell immediately, to all appearance dead. All those on foot now jumped in with their knives to cut him up; but they had scarcely begun, when the animal recovered so far as to rise upon his knees; happy then was the man that escaped first; and had not one of the Agageers, who was himself engaged in the ravine, cut the sinew of the hind leg as he was retreating, there would have been a very sorrowful account of the foot-hunters that day.

"After having dispatched him, I was curious to see what wound the shot had given, which had operated so violently upon so huge an animal; and I doubted not it was in the brain. But it had struck no where but upon the point of the foremost

horn, of which it had carried off above an inch ; and this occasioned a concussion that had stunned him for a minute, till the bleeding had recovered him."

The rhinoceros, though next in size, yet in docility and ingenuity greatly inferior to the elephant, has never yet been tamed so as to assist the labours of mankind, or to appear in the ranks of war. The Romans introduced him on the amphitheatre, and opposed him to the elephant ; it is even asserted that he appeared no unequal match. The bear was a contemptible antagonist to the rhinoceros.

The flesh of this animal, though by no means a delicate dish, is with the Shangalla and a great part of the inhabitants of Lower Abyssinia, a principal article of food. The soles of his feet, consisting of a gristly substance, soft like the soles of a camel, are the most delicate part. The rest of the flesh is said to taste like pork ; but is much coarser, and smells of musk. The negro hunters of Abyssinia eat it without salt. The hairs about the tail are so thick and strong, that with ten of them a whip may be made, which will draw blood at every stroke. The skin cut into thongs forms excellent whips.

#### SUMATRAN RHINOCEROS.

IN the Philosophical Transactions for the year 1793, we also meet with a good figure of a two-horned rhinoceros, with an accurate description by Mr. Bell, surgeon, who had resided some time in Sumatra. The specimen, however, which he describes was but young, and probably far short of its full size.

"The shape of the animal was much like that of the hog. The general colour was a brownish ash ;

under the belly, between the legs and folds of the skin, a dirty flesh colour.

“ The head resembled that of the single-horned rhinoceros. The eyes were small, of a brown colour ; the *membrana nictitans* thick and strong. The skin surrounding the eyes was wrinkled. The nostrils were wide. The upper lip was pointed, and hanging over the under.

“ There were six molares, or grinders, on each side of the upper and lower jaws, becoming gradually larger backward, particularly in the upper. Two teeth in the front of each jaw. The tongue was quite smooth. The ears were small and pointed ; lined and edged with short black hair, and situated like those of the single-horned rhinoceros. The horns were black ; the larger was placed above the nose, pointing upwards, and was bent a little back ; it was about nine inches long. The small horn was four inches long, of a pyramidal shape, flattened a little, and placed above the eyes, rather a little more forward, standing in a line with the larger horn, immediately above it. They were both firmly attached to the skull, nor was there any appearance of joints or muscles to move them. The neck was thick and short ; the skin on the under side thrown into folds and these folds again wrinkled. The body was bulky and round, and from the shoulder ran a line or fold, as in the single-horned rhinoceros, though it was but faintly marked. There were several other folds and wrinkles on the body and legs ; and the whole gave rather the appearance of softness. The legs were thick, short, and remarkably strong ; the feet are armed with three distinct hoofs of a blackish colour, which surrounded half the foot, one in front, the others on each side. The soles of the feet were convex, and of a light colour, and the cuticle on them

not thicker than on the foot of a man who is used to walking. The whole skin of the animal is rough, and covered very thinly with short black hair. The skin was not more than one third of an inch in thickness at the strongest part ; under the belly it was hardly a quarter of an inch ; any part of it might be cut through with ease by a common dissecting knife.

“ The animal had not that appearance of armour which is observed in the single-horned rhinoceros.

“ Since I dissected the male, I have had an opportunity of examining a female, which was more of a lead colour ; it was younger than the male, and had not so many folds or wrinkles in its skin : of course it had still less appearance of armour.”

The height of the first of these specimens, or the male, was, according to Mr. Bell, four feet four inches at the shoulders ; nearly the same at the rump ; and eight feet five inches from the tip of the nose to the end of the tail.

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## ELEPHANT TRIBE.

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THESE animals have no front teeth in either jaw ; and from the upper jaw proceed two long and stout tusks, which, in a state of nature, are used in tearing up trees for food, and as weapons of defence against their enemies. They have a long, cartilaginous, prehensile trunk, which is capable of laying hold even of the most minute substances. Their body is very thinly scattered over with hairs.

“ Of all quadrupeds,” says M. de Buffon, “ the







elephant is the strongest, as well as the largest ; and yet, in a state of nature, it is neither fierce nor formidable. Mild, peaceful, and brave, it never abuses its power or its strength, and only uses its force for its own protection, or that of its community. In its native deserts, the elephant is seldom seen alone, but appears to be a social, friendly creature. The oldest of the company conducts the band ; that which is next in seniority brings up the rear. The young, the weak, and the sickly, fall into the centre ; while the females carry their young, and keep them from falling by means of their trunks. They maintain this order only in dangerous marches, or when they desire to feed in cultivated grounds ; they move with less precaution in the forests and solitudes ; but without ever separating, or removing so far asunder as to be incapable of lending each other any requisite assistance. Nothing can be more formidable than a drove of elephants as they appear at a distance in an African landscape ; wherever they march, the forests seem to fall before them ; in their passage, they bear down the branches upon which they feed ; and if they enter into an inclosure, they destroy all the labours of the husbandman in a very short time. Their invasions are the more disagreeable, as there is no means of repelling them ; since it would require a small army to attack the whole drove when united. It now and then happens that one or two is found lingering behind the rest, and it is against these that the art and force of the hunters are united ; but an attempt to molest the whole body would certainly be fatal. They go forward directly against him who offers the insult, strike him with their tusks, seize him with their trunks, fling him into the air, and then trample him under their feet. But they are thus dreadful only when offended, and do no manner

of personal injury when suffered to feed without interruption. It is even said that they are mindful of injuries received ; and, when once molested by man, seek all occasions for the future to be revenged ; they smell him with their long trunks at a distance ; follow him with all their speed upon the scent ; and, though slow to appearance, they are soon able to come up with and destroy him.

In their natural state, they delight to live along the sides of rivers, to keep in the deepest vales, to refresh themselves in the most shady forests and watery places. They cannot live far from the water ; and they always disturb it before they drink. They often fill their trunk with it, either to cool that organ, or to divert themselves by spurting it out like a fountain. They are equally distressed by the extremes of heat and cold ; and, to avoid the former, they frequently take shelter in the most obscure recesses of the forest, or often plunge into the water, and even swim from the continent into islands some leagues distant from the shore.

Their chief food is of the vegetable kind, for they loath all kind of animal diet. When one among their number happens to light upon a spot of good pasture, he calls the rest, and invites them to share in the entertainment ; but it must be a very copious pasture indeed that can supply the necessities of the whole band. As with their broad and heavy feet they sink deep wherever they go, they destroy much more than they devour, so that they are frequently obliged to change their quarters, and to migrate from one country to another. The Indians and negroes, who are often incommoded by such visitants, do all they can to keep them away, making loud noises, and large fires round their cultivated grounds ; but these precautions do not always succeed ; the elephants

often break through their fences, destroy their whole harvest, and overturn their little habitations.

When they have satisfied themselves, and trod down or devoured whatever lay in their way, they then retreat into the woods in the same orderly manner in which they made their irruption.

Such are the habits of this animal considered in a social light ; and, if we regard it as an individual, we shall find its powers still more extraordinary. With a very awkward appearance, it possesses all the senses in great perfection, and is capable of applying them to more useful purposes than any other quadruped. The elephant, as we observed, has very small eyes, when compared to the enormous bulk of its body. But though their minuteness may at first sight appear deformed, yet, when we come to examine them, they are seen to exhibit a variety of expression, and to discover the various sensations with which it is moved. It turns them with attention and friendship to its master : it seems to reflect and deliberate ; and as its passions slowly succeed each other, their various workings are distinctly seen.

The elephant is not less remarkable for the excellence of its hearing. Its ears are extremely large, and greater in proportion than even those of an ass. They are usually dependent ; but it can readily raise and move them. They serve also to wipe its eyes, and to protect them against the dust and flies that might otherwise incommode them. It appears delighted with music, and very readily learns to beat time, to move in measure, and even to join its voice to the sound of the drum and the trumpet.

This animal's sense of smelling is not only exquisite, but it is in a great measure pleased with the same odours that delight mankind. The elephant gathers flowers with great pleasure and at-

tention ; it picks them up one by one, unites them into a nosegay, and seems charmed with the perfume. The orange-flower seems to be particularly grateful both to its sense of taste and smelling ; it strips the tree of all its verdure, and eats every part of it, even to the branches themselves. It seeks in the meadows the most odoriferous plants to feed upon ; and in the woods it prefers the cocoa, the banana, the palm, and the saga tree, to all others. As the shoots of these are tender and filled with pith ; it eats not only the leaves and the fruits, but even the branches, the trunk, and the whole plant to the very roots.

But it is in the sense of touching that this animal excels all others of the brute creation, and perhaps even man himself. The organ of this sense lies wholly in the trunk, which is an instrument peculiar to this animal, and that serves it for all the purposes of a hand. The trunk is, properly speaking, only the snout lengthened out to a great extent, hollow like a pipe, and ending in two openings, or nostrils, like those of a hog. An elephant of fourteen feet high has the trunk about eight feet long, and five feet and a half in circumference at the mouth, where it is thickest. It is hollow all along, but with a partition running from one end of it to the other ; so that though outwardly it appears like a single pipe, it is inwardly divided into two. This fleshy tube is composed of nerves and muscles, covered with a proper skin of a blackish colour, like that of the rest of the body. It is capable of being moved in every direction, of being lengthened and shortened, of being bent or straightened, so pliant as to embrace any body it is applied to, and yet so strong that nothing can be torn from the gripe. To aid the force of this gripe, there are several little eminences, like a caterpillar's feet, on the underside

of this instrument, which, without doubt, contribute to the sensibility of the touch, as well as to the firmness of the hold. Through this trunk the animal breathes, drinks, and smells, as through a tube ; and at the very point of it, just above the nostrils, there is an extension of the skin, about five inches long, in the form of a finger, and which, in fact, answers all the purposes of one ; for, with the rest of the extremity of the trunk, it is capable of assuming different forms at will, and consequently of being adapted to the minutest objects. By means of this, the elephant can take a pin from the ground, untie the knots of a rope, unlock a door, and even write with a pen. " I have myself seen," says *Ælian*, " an elephant writing latin characters on a board in a very orderly manner, his keeper only showing him the figure of each letter. While thus employed, the eyes might be observed studiously cast down upon the writing, and exhibiting an appearance of great skill and erudition." It sometimes happens that the object is too large for the trunk to grasp ; in such a case the elephant makes use of another expedient, as admirable as any of the former. It applies the extremity of the trunk to the surface of the object, and sucking up its breath, lifts and sustains such a weight as the air in that case is capable of keeping suspended. In this manner this instrument is useful in most of the purposes of life ; it is an organ of smelling, of touching, and of suction ; it not only provides for the animal's necessities and comforts, but it also serves for its ornament and defence.

But though the elephant be thus admirably supplied by its trunk, yet, with respect to the rest of its conformation, it is unwieldy and helpless. The neck is so short that it can scarce turn

the head, and must wheel round in order to discover an enemy from behind. The hunters that attack it upon that quarter, generally thus escape the effects of its indignation ; and find time to renew their assaults while the elephant is turning to face them. The legs are, indeed, not so inflexible as the neck, yet they are very stiff, and bend not without difficulty. Those before seem to be longer than the hinder ; but upon being measured, are found to be something shorter. The joints, by which they bend, are nearly in the middle, like the knee of a man ; and the great bulk which they are to support makes their flexure ungainly. While the elephant is young, it bends the legs to lie down or to rise ; but when it grows old or sickly, this is not performed without human assistance ; and it becomes, consequently, so inconvenient, that the animal chooses to sleep standing. The feet, upon which these massy columns are supported, form a base scarce broader than the legs they sustain. They are divided into five toes, which are covered beneath the skin, and none of which appear to the eye ; a kind of protuberance like claws are only observed, which vary in number from three to five. The apparent claws vary ; the internal toes are constantly the same. The sole of the foot is furnished with a skin as thick and hard as horn, and which completely covers the whole under part of the foot.

To the rest of the elephant's incumbrances may be added its enormous tusks, which are unserviceable for chewing, and are only weapons of defence. These, as the animal grows old, become so heavy, that it is sometimes obliged to make holes in the walls of its stall to rest them in, and ease itself of the fatigue of their support. It is well known to what an amazing size these tusks grow ; they are two in number, proceeding from

the upper jaw, and are sometimes found above six feet long. Some have supposed them to be rather the horns than the teeth of this animal ; but, besides their greater similitude to bone than to horn, they have been indisputably found to grow from the upper jaw, and not from the frontal bones, as some have thought proper to assert. Some also have asserted, that these tusks are shed in the same manner as the stag sheds his horns ; but it is very probable, from their solid consistence, and from their accidental defects, which often appears to be the effect of a slow decay, that they are as fixed as the teeth of other animals are generally found to be. Certain it is that the elephant never sheds them in a domestic state, but keeps them till they become inconvenient and cumbersome to the last degree. An account of uses to which these teeth are applied, and the manner of choosing the best ivory, belongs rather to a history of the arts than of nature.

This animal is equally singular in other parts of its conformation ; the lips and the tongue in other creatures serve to suck up and direct their drink or their food ; but in the elephant they are totally inconvenient for such purposes ; and it not only gathers its food with its trunk, but supplies itself with water by the same means. When it eats hay, as I have seen it frequently, it takes up a small wisp of it with the trunk, turns and shapes it with that instrument for some time, and then directs it into the mouth, where it is chewed by the great grinding teeth, that are large in proportion to the bulk of the animal. This packet, when chewed, is swallowed, and never ruminated again as in cows or sheep, the stomach and intestines of this creature more resembling those of a horse. Its manner of drinking is equally extraordinary. For this purpose, the elephant dips

the end of its trunk into the water, and sucks up just as much as fills that great fleshy tube completely. It then lifts up its head with the trunk full, and turning the point into its mouth, as if it intended to swallow trunk and all, it drives the point below the opening of the wind-pipe. The trunk being in this position and still full of water, the elephant then blows strongly into it at the other end, which forces the water it contains into the throat, down which it is heard to pour with a loud gurgling noise, which continues till the whole is blown down. From this manner of drinking, some have been led into an opinion that the young elephant sucks with its trunk and not with its mouth ; this, however, is a fact which no traveller has hitherto had an opportunity of seeing, and it must be referred to some future accident to determine.

The hide of the elephant is as remarkable as any other part. It is not covered over with hair as in the generality of quadrupeds, but is nearly bare. Here and there indeed, a few bristles are seen growing in the scars and wrinkles of the body, and very thinly scattered over the rest of the skin ; but in general the head is dry, rough, and wrinkled, and resembling more the bark of an old tree than the skin of an animal. This grows thicker every year ; and by a constant addition of substance, it at length contracts that disorder well known by the name of the elephantiasis, or Arabian leprosy ; a disease to which man, as well as the elephant, is often subject. In order to prevent this, the Indians rub the elephant with oil, and frequently bathe it to preserve its pliancy. To the inconveniences of this disorder is added another, arising from the great sensibility of those parts that are not callous. Upon these the flies settle in great abundance,



and torment this animal unceasingly ; to remedy which, the elephant tries all its arts ; using not only its tail and trunk in the natural manner to keep them off, but even takes the branch of a tree, or a bundle of hay, to strike them off with. When this fails, it often gathers up the dust with its trunk, and thus covers all the sensible places. In this manner it has been seen to dust itself several times a day, and particularly upon leaving the bath.

Water is as necessary to this animal as food itself. When in a state of nature, the elephant rarely quits the banks the river, and often stands in water up to the belly. In a state of servitude, the Indians take equal care to provide a proper supply ; they wash it with great address ; they give it all the conveniencies for lending assistance to itself ; they smooth the skin with a pumice-stone, and then rub it over with oils, essences, and odours.

It is not to be wondered at that an animal furnished with so many various advantages, both of strength, sagacity, and obedience, should be taken into the service of man. We accordingly find that the elephant, from time immemorial, has been employed either for the purposes of labour, of war, or of ostentation ; to increase the grandeur of eastern princes, or to extend their dominions.

We have hitherto been describing this animal in its natural state ; we now come to consider it in a different view, as taken from the forest and reduced to human obedience. We are now to behold this brave, harmless creature, as learning a lesson from mankind, and instructed by him in all the arts of war, massacre, and devastation. We are now to behold this half reasoning ani-

mal led into the field of battle, and wondering at those tumults and that madness which he is compelled to increase. The elephant is a native of Africa and Asia, being found neither in Europe nor America. In Africa he still retains his natural liberty. The savage inhabitants of that part of the world, instead of attempting to subdue this powerful creature to their necessities, are happy in being able to protect themselves from his fury. Formerly, indeed, during the splendor of the Carthaginian empire, elephants were used in their wars; but this was only a transitory gleam of human power in that part of the globe; the natives of Africa have long since degenerated, and the elephant is only known among them from his devastations. However, there are no elephants in the northern parts of Africa at present, there being none found on this side of Mount Atlas. It is beyond the river Senegal that they are to be met with in great numbers, and so down to the Cape of Good Hope, as well as in the heart of the country. In this extensive region they appear to be more numerous than in any other part of the world. They are there less fearful of man; less retired into the heart of the forests; they seem to be sensible of his importance and ignorance, and often come down to ravage his little labours. They treat him with the same haughty disdain which they show to other animals, and consider him as a mischievous little being, that fears to oppose them openly.

But although these animals are most plentiful in Africa, it is only in Asia that the greatest elephants are found, and rendered subservient to human command. In Africa, the largest do not exceed ten feet high; in Asia, they are found from ten to fifteen. Their price increases in pro-

portion to their size ; and when they exceed a certain bulk, like jewels, their value then rises as the fancy is pleased to estimate.

The largest are entirely kept for the service of princes ; and are maintained with the utmost magnificence, and at the greatest expence. The usual colour of the elephant is a dusky black, but some are said to be white ; and the price of one of these is inestimable. Such a one is peculiarly appropriated for the monarch's own riding ; he is kept in a palace, attended by the nobles, and almost adored by the people. Some have said that these white elephants are larger than the rest ; others assert that they are less ; and still, others entirely doubt their existence.

As the art of war is but very little improved in Asia, there are few princes of the East who do not procure and maintain as many elephants as they are able, and place great confidence on their assistance in an engagement. For this purpose they are obliged to take them wild in their native forests, and tame them ; for the elephant never breeds in a state of servitude. It is one of the most striking peculiarities in this extraordinary creature, that his generative powers totally fail when he comes under the dominion of man ; as if he seemed unwilling to propagate a race of slaves, to increase the pride of his conqueror. There is, perhaps, no other quadruped that will not breed in its own native climates, if indulged with a moderate share of freedom ; and we know that many of them will copulate in every climate. The elephant alone has never been seen to breed ; and though he has been reduced under the obedience of man for ages, the duration of pregnancy in the female still remains a secret. Aristotle, indeed, asserts, that she goes two years with young ; that she continues to suckle her young for

three years, and that she brings forth but one at a time ; but he does not inform us of the manner in which it was possible for him to have his information. From authorities equally doubtful we learn, that the little one is about as large as a wild boar the instant it is brought forth ; that its tusks do not yet appear ; but that all the rest of its teeth are apparent ; that at the age of six months, it is as large as an ox, and its tusks pretty well grown ; and that it continues in this manner, for near thirty years, advancing to maturity. All this is doubtful ; but it is certain that, in order to recruit the numbers which are consumed in war, the princes of the East are every year obliged to send into the forests, and to use various methods to procure a fresh supply. Of all these numerous bands, there is not one that has not been originally wild ; nor one that has not been forced into a state of subjection. Men themselves are often content to propagate a race of slaves, that pass down in this wretched state through successive generations ; but the elephant, under subjection, is unalterably barren ; perhaps from some physical causes, which are as yet unknown.

As the modes of taking this animal, and rendering it submissive to human authority, merit particular attention, I shall, in a cursory manner, describe those pursued by the inhabitants of a few of the different countries of the East.

At Tepura, in the East Indies, the manner of securing a single male, is very different from that employed in taking a herd. In the former case, which I shall first mention, the animal is taken by means of koomkees, or female elephants, trained for the purpose ; whereas in the latter case they are driven into a strong inclosure.

As the hunters know the places where the elephants come out to feed, they advance towards

them in the evening with four koomkees, the number of which each hunting party consists. When the nights are dark, the male elephants are discovered by the noise they make in cleaning their food, which they do by whisking and striking it against their fore legs; and in the moon-light nights they may be seen distinctly at some distance.

As soon as the hunters have determined on the animal they mean to secure, three of the koomkees are conducted silently and slowly, at a little distance from each other, near to the place where he is feeding. The koomkees advance very cautiously, feeding as they go along, and appear like wild elephants that have strayed from the forest. When the male perceives them approaching, if he takes the alarm, and is viciously inclined, he beats the ground with his trunk, and makes a noise, shewing evident marks of his displeasure, and that he will not allow them to approach nearer. In this case, if they persist, he will immediately attack and gore them with his tusks; for which reason they take care to retreat in good time. He, however, generally allows them to approach, and sometimes even advances to meet them.

The drivers now conduct two of the females, one on each side, close to him, and make them press themselves gently against his neck and shoulders; the third female then comes up, and places herself directly across his tail. In this situation, far from suspecting any design against his liberty, he begins to toy with the females, and caresses them with his trunk. While thus engaged, the fourth female is brought near, attended by proper assistants, furnished with ropes, who immediately get under the belly of the animal at the tail, and put a slight rope round his legs. If he takes no notice of this slight confinement, the hunters

proceed to tie his legs with a stronger rope ; which is passed alternately, by means of a forked stick, and a kind of hook, from one leg to the other, in the form of a figure of eight. Six or eight of these ropes are generally employed, one above another ; and they are fastened at their intersections by another rope, that is made to pass perpendicular up and down. A strong cable, with a running noose, sixty cubits long, is next put round each hind leg, above the other ropes ; and afterwards six or eight other ropes are crossed from leg to leg above the cable. The fixing these ropes usually occupies about twenty minutes, during which time the utmost silence is observed.

When thus properly secured, the animal is left to himself, the koomkees retiring to a little distance. In attempting to follow them, he finds his legs tied ; and becoming sensible of the danger of his situation, immediately retreats towards the jungle. The drivers, mounted on the tame elephants, accompanied by a number of people, who till this time have been kept out of sight, follow him at a little distance ; and as soon as he passes near a tree sufficiently stout to hold him, they take a few turns with the long cables which trailed behind him, round his trunk. His progress being thus stopped, he becomes furious, and exerts his utmost efforts to disengage himself. The koomkees dare not now come near him ; and in his fury he falls down on the earth, and tears it up with his tusks. In these exertions he sometimes breaks the cables, and escapes into the thick jungle. Hither the drivers cannot advance, for fear of the other wild elephants ; and are therefore obliged to leave him to his fate. But as the cables are strong, and very seldom give way, when he has exhausted himself by his exertions, the koomkees are again brought near, and take their former posi-

tions, one on each side, and the other behind. After getting him nearer the tree, the people carry the ends of the long cables two or three times round it, so as to prevent the possibility of his escape. His fore legs are now tied in the same manner as his hind legs were ; and the cables are made fast, one on each side, to trees, or stakes driven deep into the earth.

When he has become more settled, and will eat a little food, with which he is supplied as soon as he is taken, the koomkees are again brought near, and a strong rope is then put twice round his body, close to his fore legs, like a girth, and tied behind his shoulder ; then the end is carried backward close to his rump, and there fastened, after a couple of turns more have been made round his body. Another rope is next fastened to this, and thence carried under his tail like a crupper, and brought forward and fastened to each of the girths. A strong rope is now put round his buttocks, and made fast on each side to the girth and crupper ; so as to confine the motion of his thighs, and prevent him from taking a full step. A couple of large cables, with running nooses, are now put about his neck, there secured, and tied to the ropes on each side. Thus completely hampered, the cables round his neck are made fast to two koomkees, one on each side.

Every thing being now ready, and a passage cleared from the jungle, all the ropes are taken from his legs, except the strong one round his buttocks to confine the motion of his hind legs, which is still left. The koomkees pull him forward ; sometimes, however, not without much struggling and violence on his part. When brought to his proper station, and made fast, he is treated with a mixture of severity and gentleness ; and generally in a few months becomes tractable, and appears per-

fectly reconciled to his fate. It seems somewhat extraordinary, that though the animal uses his utmost force to disengage himself when taken, and would kill any person coming within his reach, yet he seldom or never attempts to hurt the females that have ensnared him ; but, on the contrary, seems (as often as they are brought near, in order to adjust his harnessing, or move and slacken those ropes which gall him) pleased, soothed, and consoled by them, as it were, for the loss of his liberty.

The mode of securing a herd of wild elephants is very different from that adopted in taking a single male, and the process is much more tedious.

When a herd, which generally consists of from about forty to a hundred, is discovered, about five hundred people are employed to surround it. By means of fire and noises, they, in the course of some days, are able to drive them to the place where they are to be secured. This is called the *keddah*. It consists of three inclosures, communicating with each other by means of narrow openings or gateways. The outer one is the largest, the middle generally the next in size, and the third or furthest the smallest. When the animals arrive near the first inclosure, (the palisades and two gates of which are as much as possible disguised with branches of trees and bamboos stuck in the ground, so as to give them the appearance of a natural jungle,) great difficulty attends the business of getting them in. The leader always suspects some snare, and it is not without the utmost hesitation that he passes ; but as soon as he enters, all the rest implicitly follow. Immediately, when they have passed the gateway, fires are lighted round the greatest part of the inclosure, and particularly at the entries, to prevent the elephants from returning. The hunters from without then



make a terrible noise by shouting, beating of tom-toms (a kind of drum), firing blank cartridges, &c. to urge them on to the next inclosure. The elephants, finding themselves entrapped, scream and make other noises ; and discovering no opening except the entrance to the next inclosure, they at length, but not before they have many times traversed round their present situation, following their leader, enter it. The gate is instantly shut upon them, fires are lighted, and the same discordant noises made as before, till they have passed through another gateway into the last inclosure, where they are secured in a similar manner. Being now completely surrounded on all sides, and perceiving no outlet through which they can escape, they appear desperate, and in their fury advance frequently to the surrounding ditch, in order to break down the palisade, inflating their trunks, and screaming out aloud ; but wherever they make an attack, they are opposed by lighted fires, and by the noise and triumphant shouts of the hunters. The ditch is then filled with water ; and after a while they have recourse to it, in order to quench their thirst and cool themselves, which they do by drawing the water into their trunks, and then squirting it over every part of their bodies.

When the elephants have continued in the inclosure a few days, where they are regularly, though scantily, fed from a scaffold on the outside, the door of the roomee (an outlet about sixty feet long and very narrow) is opened, and one of the elephants is enticed to enter, by having food thrown before it. When the animal has advanced far enough to allow it, the gate is shut and well secured on both sides. Finding his retreat now cut off, and the place so narrow that he cannot turn himself, he advances, and exerts his utmost efforts

to break down the bars in front of him, running against them, screaming and roaring most violently, and battering them, like a ram, by repeated blows with his head, retreating and advancing with the utmost fury. In his rage he even rises up, and leaps upon the bars with his fore feet, striving to break them down with his huge weight. When he becomes somewhat fatigued with these exertions, ropes are, by degrees, put round him ; and he is secured in a manner nearly similar to that adopted in taking the single males. And thus, in succession, they are all secured.

The elephants are now separated, and each put under the care of a keeper, who is appointed to attend and instruct him. Under this man, there are three or four others, who assist in supplying food and water, till the animal becomes sufficiently tractable to feed himself. A variety of soothing and caressing arts are practised : sometimes the keeper threatens, and even goads him with a long stick pointed with iron ; but more generally coaxes and flatters him, scratching his head and trunk with a long bamboo split at one end into many pieces, and driving away the flies from his sores and bruises. In order to keep him cool, he likewise squirts water all over him ; carefully standing out of the reach of his trunk.

In a few days he advances cautiously to his side, and strokes and pats him with his hand, at the same time speaking to him in a soothing voice ; and after a little while, the beast begins to know his keeper and obey his commands. By degrees the latter becomes familiar, and at length mounts upon his back from one of the tame elephants ; from hence he gradually increases the intimacy as the animal becomes more tame, till at last he is permitted to seat himself on his neck, from which place he is afterwards to regulate and direct all

his motions. While they are training in this manner, the tame elephants lead the others out alternately, for the sake of exercise ; and likewise to ease their legs from the cords with which they are tied, and which are apt to gall them, unless they are regularly slackened and shifted.

In five or six weeks the elephant becomes obedient to his keeper, his fetters are taken off by degrees, and generally in about six months he suffers himself to be conducted from one place to another. Care, however, is always taken not to let him approach his former haunts, lest a recollection of them should induce him to attempt to recover his liberty.

The following is Mr. Bruce's account of elephant-hunting in Abyssinia. The men who make the hunting of elephants their business, he says, dwell constantly in the woods, living entirely upon the flesh of the animals they kill, which is chiefly that of the elephant or rhinoceros. They are exceedingly thin, light, and agile, both on horseback and foot. They are called *agageers* ; a name derived from the word *agar*, which signifies to hough or ham-string with a sharp weapon. More properly it means, indeed, the cutting of the tendon of the heel ; and is a characteristic of the manner in which they kill the elephant, which is thus :

Two men, quite naked, to prevent their being laid hold of by the trees or bushes in making their escape from this very watchful enemy, get on horseback. One of them sits on the back of the horse, sometimes with a saddle, and sometimes without one, with only a switch or short stick in one hand, carefully managing the bridle with the other ; behind him sits his companion, armed only with a broad sword. His left hand is employed in grasping the sword by the handle ; about four-

teen inches of the blade of which are covered with whip-cord. This part he takes in his right hand, without any danger of being hurt by it ; and, though the edges of the lower part of the sword are as sharp as a razor, he carries it without a scabbard.

As soon as an elephant is found feeding, the horseman rides before him, as near to his face as possible ; or, if he tries to escape, crosses him in all directions, calling out, " I am such a one, and such a one, this is my horse, that has such a name ; I killed your father in such a place, and your grandfather in such another place, and I am now come to kill you, who are nothing in comparison with them." This nonsense he believes the elephant perfectly to understand ; who, chafed and angry at hearing the noise immediately before him, attempts to seize him with his trunk ; and, intent upon this, follows the horse every where, turning round and round with him, neglecting to make his escape by running straight forward, in which consists his only safety. After having made him turn a few times in pursuit of the horse, the horseman rides close up beside of him, and drops his companion just behind, on the off side ; and while he engages the elephant's attention upon the horse, the other behind gives him a drawn stroke just above the heel, into what in man is called the tendon of Achilles. This is the critical moment ; the horseman immediately wheels round, again takes his companion up behind him, and rides off at full speed after the rest of the herd, if they have started more than one ; and sometimes an expert agageer will kill three out of one herd. If the sword is good, and the man not too timid, the tendon is in common entirely separated ; and, if not cut through, is generally so far divided that the animal, with the stress he puts upon it, breaks

the remaining part asunder. In either case, he remains incapable of advancing a step, till the horseman returning, or his companions coming up, pierce him through with javelins and lances ; he then falls to the ground, and expires from loss of blood. The elephant being slain, they cut his flesh into thongs, like the reins of a bridle, and hang these, like festoons, upon the branches of trees, till they become perfectly dry, without salt, and then lay them by for their provision in the season of the rains.

In one of these elephant-huntings, Mr. Bruce mentions a striking instance of affection in a young one to its mother : “ There now remained (says he) but two elephants of these that had been discovered ; which were a she one with a calf. The agageer would willingly leave these alone, as the teeth of the female are very small, and the young one is of no sort of value whatever. But the hunters would not be limited in their sport. The people having observed the place of her retreat, thither we eagerly followed. She was very soon found, and as soon lamed by the agageers ; but when they came to wound her with their darts, as every one did in their turn, to our very great surprise, the young one, which had been suffered to escape unheeded and unpursued, rushed out from the thicket, apparently in great anger, and ran upon the horses and men, with all the violence it was master of. I was amazed, and as much as ever I was upon such an occasion, afflicted, at seeing the affection of the little animal in defending its wounded mother, heedless of its own life or safety. I therefore cried to them, for God’s sake, to spare the mother, but it was then too late ; and the calf had made several rude attacks upon me, which I avoided without difficulty ; but I am happy to this day, in the reflection that I did not strike

it. At last, making one of its attacks upon Ayton Egedan (another of the party,) it hurt him a little on the leg ; on which he thrust it through with his lance, as others did after, and it then fell dead before its wounded mother, whom it had so affectionately defended. It was about the size of an ass, but round, big-bellied, and heavily made ; and was so furious and unruly, that it would easily have broken the leg of a man or a horse, could it have overtaken, and jostled against them properly."

In some parts of the East the elephants are taken by means of pit-falls. Through the woody forests several paths are cut ; in these are dug deep and large holes, which are carefully covered over with branches and loose earth.

On distant Ethiopia's sun-burnt coasts,  
 The black inhabitants a pit-fall frame ;  
 With slender poles the wide capacious mouth,  
 And hurdles light, they close ; o'er these is spread  
 A floor of verdant turf, with all its flowers  
 Smiling delusive, and from strictest search  
 Concealing the deep grave that yawns below.  
 Then boughs of trees they cut, with tempting fruit  
 Of various kinds surcharg'd ; the downy peach,  
 The clust'ring vine, and of bright golden rind  
 The fragrant orange. Soon as ev'ning grey  
 Advances, slow besprinkling all around  
 With kind refreshing dews the thirsty glebe,  
 The stately elephant from the close shade  
 With step majestic strides ; eager to taste  
 The cooler-breeze that from the sea-beat shore  
 Delightful breathes, or in the limpid stream  
 To lave his panting sides ; joyous he scents  
 The rich repast, unweeting of the death  
 That lurks within. And soon he sporting breaks  
 The brittle boughs, and greedily devours  
 The fruit delicious.—Ah ! too dearly bought ;  
 The price is life. For now the treach'rous turf  
 Trembling gives way ; and the unweildy beast,  
 Self-sinking, drops into the dark profound.

When the hunters have sufficiently secured the animals, with strong ropes tied round their limbs, they are dragged out and taken home to be tamed. Of their mode of performing this I shall give the account of Tavernier, from his Travels in India, who tells us that he was himself present at the taming of two that had been taken not long before. "After two hours travel, we came to a great village, where we saw the two elephants that had been lately taken. Each of these was placed between two tame ones. Round the wild elephants stood six men, each with a half-pike in his hand, with a lighted torch fastened at the end of it, who talked to the animals, giving them meat, and calling to them in their own language '*take it, take it.*' If the wild elephants refused to do as they were bid, the men made signs to the tame ones to beat them; which they did thus: one of them banged the refractory elephant about the head with his trunk, and if he offered to make any resistance, the other thwacked him on the other side; so that the poor animal, not knowing what to do, was at length constrained to become obedient."

It has been stated, that the sagacity of the elephant is so great, and his memory so retentive, that when once he has received an injury, or been in bondage and afterwards escaped, it is not possible, by any art, again to entrap him. The following instances, recorded in the Philosophical Transactions for 1799, will prove, however, that this is not the fact:

"A female elephant was first taken in the year 1765, by rajah Kishun Maunick, who, about six months after, gave her to Abdoor Rezah, a man of some rank and consequence in the district. In 1767, the rajah sent a force against this Abdoor Rezah, for some refractory conduct, who, in his

retreat to the hills, turned the above-mentioned beast loose into the woods, after having used her above two years as a riding elephant. She was afterwards retaken; but broke loose in a stormy night, and again escaped. In the year 1782, above ten years after her second escape, she was driven by the elephant-hunters belonging to Mr. Leeke, of Longford-hall, in Shropshire, into the inclosure in which the elephants are secured; and the day following, when Mr. Leeke went to see the herd that had been taken, this elephant was pointed out to him by the hunters, who well recollected her. They frequently called to her by name; to which she seemed to pay some attention, by immediately looking towards them when it was repeated; nor did she appear like the wild elephants, who were constantly running about the inclosure in a rage, but seemed perfectly reconciled to her situation.

“ For the space of eighteen days, she never went near enough the outlet to be secured; from a recollection perhaps of what she had twice before suffered. Mr. Leeke, at length, went himself, when there were only herself, another female, and eight young ones remaining in the inclosure. After the other female had been secured, by means of the trained female elephants, called koomkees, sent in for that purpose, the hunters were ordered to call on her by her name. She immediately came to the side of the ditch, within the inclosure; on which some of the drivers were desired to carry in a plaintain tree, the leaves of which she not only took from their hands with her trunk, but opened her mouth for them to put a leaf into it, which they did, stroking and caressing her, and calling to her by name. One of the trained elephants was now ordered to be brought to her, and the driver to take her by the ear, and order her to



lie down. At first she did not like the koomkee to go near her, and retired to a distance, seeming angry ; but, when the drivers, who were on foot, called to her, she came immediately, and allowed them to stroke and caress her as before ; and in a few minutes after, permitted the trained elephants to be familiar. A driver from one of these then fastened a rope round her body, and instantly jumped on her back, which, at the moment, she did not like, but was soon reconciled to it. A small cord was then put round her neck, for the driver to put his feet in ; who, seating himself on the neck, in the usual manner, drove her about the inclosure, in the same manner as any of the tame elephants. After this he ordered her to lie down, which she instantly did ; nor did she rise till she was desired. He fed her from his seat, gave her his stick to hold, which she took with her trunk, and put into her mouth, kept, and then returned it as she was directed, and as she had formerly been accustomed to do. In short, she was so obedient, that had there been more wild elephants in the inclosure, she would have been useful in securing them.

“ In June, 1787, a male elephant, taken the year before, was travelling in company with some others, towards Chittigong, laden with baggage ; and having come upon a tiger's track, which elephants discover readily by the smell, he took fright and ran off to the woods, in spite of all the efforts of his driver. On entering the wood, the driver saved himself by springing from the animal, and clinging to the branch of a tree under which he was passing. When the elephant had got rid of his driver, he soon contrived to shake off his load. As soon as he ran away, a trained female was dispatched after him, but could not get up in time to prevent his escape.

“ Eighteen months after this, when a herd of elephants had been taken, and had remained several days in the inclosure, till they were enticed into the outlet, there tied, and led out in the usual manner, one of the drivers, viewing a male elephant very attentively, declared he resembled the one which had run away. This excited the curiosity of every one to go and look at him ; but, when any person came near, the animal struck at him with his trunk, and in every respect appeared as wild and outrageous as any of the other elephants. An old hunter at length, coming up and examining him, declared that he was the very elephant that had made his escape.

“ Confident of this, he boldly rode up to him on a tame elephant, and ordered him to lie down, pulling him by the ear at the same time. The animal seemed taken by surprize, and instantly obeyed the word of command, uttering at the same time a peculiar shrill squeak through his trunk, as he had formerly been known to do ; by which he was immediately recognized by every person who was acquainted with this peculiarity.”

Thus we see that this elephant, for the space of eight or ten days, during which he was in the inclosure, appeared equally wild and fierce with the boldest elephant then taken ; but the moment he was addressed in a commanding tone, the recollection of his former obedience seemed to rush upon him at once ; and, without any difficulty, he permitted a driver to be seated on his neck, who in a few days made him as tractable as ever.

“ A female elephant, belonging to a gentleman at Calcutta, being ordered from the upper country to Chotygoné, by chance broke loose from her keeper, and was lost in the woods. The excuses which the keeper made were not admitted. It was supposed that he had sold the elephant ; his wife

and family therefore were sold for slaves, and he was himself condemned to work upon the roads. About twelve years afterwards, this man was ordered up into the country to assist in catching the wild elephants. The keeper fancied he saw his long-lost elephant in a group that was before them. He was determined to go up to it; nor could the strongest representations of the great danger dissuade him from his purpose. When he approached the creature, she knew him; and giving him three salutes by waving her trunk in the air, knelt down and received him on her back. She afterwards assisted in securing the other elephants, and likewise brought with her three young ones, which she had produced during her absence. The keeper recovered his character; and as a recompence for his sufferings and intrepidity, had an annuity settled on him for life. This elephant was afterwards in the possession of governor Hastings."

These and several other instances that have occurred, clearly evince, that elephants have not the sagacity to avoid a snare into which they have, even more than once, fallen.

The elephant, when once tamed, becomes the most gentle and obedient of all animals. It soon conceives an attachment for the person that attends it; caresses him, obeys him, and seems to anticipate his desires. In a short time it begins to comprehend several of the signs made to it, and even the different sounds of the voice; it perfectly distinguishes the tone of command from that of anger or approbation, and it acts accordingly. It is seldom deceived in its master's voice; it receives his orders with attention, and executes them with prudence, eagerly, yet without precipitation. All its motions are regulated; and its actions seem to partake of its magnitude; being grave, majestic, and secure. It is quickly

taught to kneel down, to receive its rider ; it caresses those it knows with its trunk ; with this salutes such as it is ordered to distinguish, and with this, as with a hand, helps to take up a part of its load. It suffers itself to be arrayed in harness, and seems to take a pleasure in the finery of its trappings. It draws either chariots, cannon, or shipping, with surprising strength and perseverance ; and this, with a seeming satisfaction, provided that it be not beaten without a cause, and that its master appears pleased with its exertions.

The elephant's conductor is usually mounted upon its neck, and makes use of a rod of iron to guide it, which is sometimes pointed, and at others bent into a hook. With this the animal is spurred forward, when dull or disobedient ; but, in general, a word is sufficient to put the gentle creature into motion, especially when it is acquainted with its conductor. This acquaintance is often perfectly necessary ; for the elephant frequently takes such an affection to its keeper, that it will obey no other ; and it has been known to die for grief, when, in some sudden fit of madness, it has killed its conductor.

We are told that one of these, that was used by the French forces in India for the drawing their cannon, was promised, by the conductor, a reward, for having performed some painful service ; but being disappointed of its expectations, it slew him in a fury. The conductor's wife, who was a spectator of this shocking scene, could not restrain her madness and despair ; but running with her two children in her arms, threw them at the elephant's feet, crying out, that since it had killed her husband, it might kill her and her children also. The elephant, seeing the children at his feet, instantly stopped, and moderating its fury, took up the eldest with

its trunk, and placing him upon its neck, adopted him for its conductor, and obeyed him ever after with great punctuality.

But it is not for drawing burdens alone, that the elephants are serviceable in war; they are often brought into the ranks, and compelled to fight in the most dangerous parts of the field of battle. There was a time, indeed, in India, when they were much more used in war than at present. A century or two ago, a great part of the dependence of the general, was upon the number and the expertness of his elephants; but of late, since war has been contented to adopt fatal, instead of formidable arts, the elephant is little used, except for drawing cannon, or transporting provisions. The princes of the country are pleased to keep a few for ornament, or for the purposes of removing their seraglios; but they are seldom led into field of battle, where they are unable to withstand the discharge of fire-arms, and have often been found to turn upon their employers.

Still, however, they are used in war, in the more remote parts of the East; in Siam, in Cochin-China, in Tonquin, and Pegu. In all these places, they not only serve to swell the pomp of state, being adorned with all the barbarian splendor that those countries can bestow, but they are actually led into the field of battle, armed before with coats of mail, and loaded on the back each with a square tower, containing from five combatants to seven. Upon its neck sits the conductor, who goads the animal into the thickest ranks, and encourages it to increase the devastation: wherever it goes, nothing can withstand its fury; it levels the ranks with its immense bulk, flings such as oppose it into the air, or crushes them to death under its feet. In the mean time, those who are placed upon its back combat as from

an eminence, and fling down their weapons with double force, their weight being added to their velocity. Nothing, therefore, can be more dreadful, or more irresistible, than such a moving machine, to men unacquainted with the modern arts of war; the elephant, thus armed and conducted, raging in the midst of the field of battle, inspires more terror than even those machines that destroy at a distance, and are often most fatal, when most unseen. But this method of combating is rather formidable than effectual; polished nations have ever been victorious over these semi-barbarous troops, that have called in the elephant to their assistance, or attempt to gain a victory by merely astonishing their opposers. The Romans quickly learned the art of opening their ranks to admit the elephant, and thus separating it from assistance, quickly compelled its conductors to calm the animal's fury, and to submit. It sometimes also happened that the elephant became impatient of control; and instead of obeying its conductor, turned upon those forces it was employed to assist. In either case, there was a great deal of preparation to very little effect, for a single elephant is known to consume as much as forty men in a day.

At present, therefore, they are chiefly employed in carrying, or drawing burdens, throughout the whole peninsula of India; and no animal can be more fitted by nature for this employment. The strength of an elephant is equal to its bulk, for it can, with great ease, draw a load that six horses could not remove; it can readily carry upon its back three or four thousand weight; upon its tusks alone it can support near a thousand; its force may also be estimated from the velocity of its motion, compared to the mass of its body. It can go, in its ordinary pace, as fast as a horse at an easy trot; and, when pushed, it can move as

swiftly as a horse at full gallop. It can travel with ease fifty or sixty miles a day ; and, when hard pressed, almost double that distance. It may be heard trotting on at a great distance ; it is easy also to follow it by the track, which is deeply impressed on the ground, and from fifteen to eighteen inches in diameter.

In India they are also put to other very disagreeable offices ; for in some courts of the more barbarous princes, they are used as executioners ; and this horrid task they perform with great dexterity : with their trunks they are seen to break every limb of the criminal at the word of command ; they sometimes trample him to death, and sometimes impale him on their enormous tusks, as directed. In this the elephant is rather the servant of a cruel master, than a voluntary tyrant, since no other animal of the forest is so naturally benevolent and gentle ; equally mindful of benefits as sensible of neglect, he contracts a friendship for his keeper, and obeys him even beyond his capacity.

In India, where they were at one time employed in launching ships, a particular elephant was directed to force a very large vessel into the water ; the work proved superior to its strength, but not to its endeavours ; which, however, the keeper affected to despise. " Take away," says he, " that lazy beast, and bring another better fitted for service." The poor animal upon this instantly redoubled its efforts, fractured its skull, and died upon the spot.

In Deli, an elephant, passing along the streets, put his trunk into a tailor's shop, where several people were at work. One of the persons of the shop, desirous of some amusement, pricked the animal's trunk with his needle, and seemed highly

delighted with this slight punishment. The elephant, however, passed on without any immediate signs of resentment ; but coming to a puddle filled with dirty water, he filled his trunk, returned to the shop, and spurted the contents over all the finery upon which the tailors were then employed.

An elephant in Adsmeer, which often passed through the bazer, or market, as he went by a certain herb-woman, always received from her a mouthful of greens. Being one day seized with a periodical fit of madness, he broke his fetters, and running through the market, put the crowd to flight, and, among others, this woman, who in her haste forgot a little child at her stall. The elephant, recollecting the spot where his benefactress was accustomed to sit, took up the infant gently in his trunk, and conveyed it to a place of safety.

At the Cape of Good Hope it is customary to hunt those animals for the sake of their teeth. Three horsemen, well mounted, and armed with lances, attack the elephant alternately, each relieving the other, as they see their companion pressed, till the beast is subdued. Three Dutchmen, brothers, who had made large fortunes by this business, determined to retire to Europe, and enjoy the fruits of their labours ; but they resolved, one day before they went, to have a last chase, by way of amusement ; they met with their game, and began their attack in the usual manner ; but, unfortunately, one of their horses falling, happened to fling his rider, the enraged elephant instantly seized the unhappy huntsman with his trunk, flung him up to a vast height in the air, and received him upon one of his tusks as he fell ; and then turning towards the other two



brothers, as if it were with an aspect of revenge and insult, held out to them the impaled wretch, writhing in the agonies of death.

Ceylon is famed for its elephants. Some of the Dutch have observed the manners of the wild elephants in that island with singular attention. They live in small troops, or distinct families. The old ones often stand while they sleep. In wandering from place to place, the males, who are armed with the largest tusks, put themselves at the head of the troops. These are the first to face every difficulty. In swimming over any large river, these lead the van, and seek out a landing place; next follow the young elephants that have not yet attained their full growth, clinging together by the trunks; the rest of the full grown bring up the rear.

A solitary elephant, who seems to have been expelled from the herd to which he belonged, is sometimes met with in the woods. Such a vagabond is uncommonly fierce and dangerous. The enormous bulk of the elephant renders his air grave and stupid, and all his motions slow. A nimble Indian will outrun the swiftest. To avoid danger, or attack an enemy, an elephant lengthens and quickens his step, so as to keep up with a horse at a brisk gallop, but not at full speed.

In the island of Sumatra, where the herds of wild elephants prove extremely troublesome; wandering over the cultivated grounds, and partly by the impression of their feet, partly by devouring the plantanes and sugar-canes, obliterating all traces of cultivation; the inhabitants often split and impregnate a part of their canes with poison; and of these the elephant eating unwarily, dies.

The Ceylonese sometimes surround, in numerous bands, the woods which the elephants inha-

bit, and with flaming torches, the discharge of guns, and other noises, drive the animals before them into a park previously prepared, and inclosed with strong palisades. Sometimes persons, eminent for activity and courage, will single out an elephant in the woods, pursue him till they can fling a sort of springe, made of cord, round his hinder legs, and winding and fastening the other end of this round a tree, bring two tame elephants, between whom he is conducted home to captivity, and who, if he prove refractory by the way, are directed to beat him with their trunks. Tame females are also led out, at times, to inveigle wild males. As soon as one of these females has enticed a male from the savage herd, a part of her conductors seize her captive, while the rest make a noise to frighten away his companions.

Mankind have, in all ages, been at great pains in taming elephants. When Alexander penetrated into India, the natives opposed him upon tame elephants, which they had trained to military discipline. The Greeks, who at first beheld them with terror, after triumphing over the nations of the East, introduced them into their own armies. Either a part of those very elephants which Alexander brought from India, or others brought soon after into Greece, were carried by Pyrrhus into Italy, when he went to oppose the Romans. His elephants, with the Macedonian tacticts, rendered him at first no unequal match to the warriors of Rome. But Roman discipline and Roman magnanimity, soon triumphed over his military skill and his gigantic cavalry. Elephants were often after that exhibited at Rome. The Carthaginians, as well as Pyrrhus, found them but weak aids against Roman valour. In the circus they were at first driven about, and slain with darts. They were afterwards opposed

opposed to bulls, and to the rhinoceros. Pliny relates that a number of elephants, exhibited in the circus by Pompey, when they found themselves destined to immediate death, made a vigorous, but ineffectual effort to break through the iron railing, in which they were inclosed. Frustrated in the attempt, they, with a wailing voice, and in a suppliant posture, seemed to implore the compassion of the spectators ; and so impulsively were the whole people affected with the distress and the sensibility of those majestic animals, that they, with one assent, arose, and in tears imprecated destruction on the head of the magnificent general who entertained them with that splendid spectacle ; imprecations, says the historian, which soon after took effect.

The successors of Alexander appear to have long continued the use of elephants in their armies. One of the brave Jewish brothers, the Maccabees, terminated his life in a glorious manner, by piercing the belly of an elephant, in the army of one of those monarchs fighting against his countrymen, with a deadly wound, and suffering himself to be crushed to death under the falling mass. Elephants trained to war among the Greeks, had turrets raised on their backs, from which troops of armed men annoyed the enemy ; while a person, sitting on the neck, directed the motions of the elephant, and animated him to fight with his trunk. But when scared or wounded, they disdained all government, and spread confusion not less readily among their friends, than through the adverse army.

The East is the great theatre on which the strength, the ingenuity, and the generous qualities of this species have been chiefly displayed. The Indian princes estimate their power and grandeur by the number of their elephants. Many of the

Indians are persuaded that so majestic a body must be animated by the soul of a departed king or hero.

In Siam, Pegu, Laos, white elephants are viewed with peculiar veneration, as the living manes of deceased emperors. Each has a palace, domestics, golden vessels, choice food, splendid robes. They are subjected to no servile labours, and are taught to bow the knee to the reigning emperor, but before none else.

When an elephant wishes merely to terrify any person, he runs upon him with an aspect of fury, but stops when near, without inflicting any injury. He lades a boat in a river with amazing dexterity, carefully keeping all the articles dry, and disposing them so that their arrangement needs not to be changed. In raising wheeled carriages, heavily loaded, up a declivity, he pushes the carriage forward with his front, advances, supports it with his knee, and renews his effort. If dragging a beam of wood along the ground, he removes obstacles to make it run smooth and easily.

The majestic elephant on which Porus rode in the battle in which he opposed Alexander, displayed a strong attachment to his master. When the Indian monarch, though exhausted with fatigue, and covered with wounds, obstinately refused to retire or yield himself prisoner, and the Grecian soldiers pressed hard upon him, his elephant still obeyed his direction, though all his companions had fled; still defended his master, and attacked those who approached against him, with firm and ardent courage.

M. D'Obsonville relates an anecdote of an elephant which represents him in a very amiable light. In the Laknaor, the capital of Soubah, during the rage of an epidemic distemper, the principal road to the palace gate was covered with

sick and dying wretches, extended on the ground, and incapable of removing; at a time when the nabob was to pass on his elephant. The indifference of the prince about the lives of his perishing subjects, the haste with which he was to pass, and the awkward motions, and heavy steps of the elephant, seemed to threaten inevitable death to a number of those unhappy wretches. But the generous quadruped, without receiving any command to the purpose, and even without slackening his pace, very dexterously assisted the poor creatures with his trunk, removing some, raising others, and stepping over the rest; so that none suffered the slightest injury. In what is an animal, capable of such prudence, such dexterity, and such gentle humanity, inferior to man? In this action, both intelligence and virtue conspicuously appear.

Elephants are more influenced by a regard to the consequences of their actions than almost any other domesticated animals. On the promise of a reward, they are often induced to extraordinary exertions of ingenuity and strength. The same curious observer of the economy of animals, relates that he has seen two elephants employed in concert in beating down a wall; who, encouraged by their cornacks, with a promise of fruits and brandy, doubled up their trunks to save them from injury, combined their efforts, thrust with repeated shocks against the strongest part of the wall, carefully marked the success of their exertions, and at last, with one grand impulse, levelled the fabric, retiring hastily to avoid suffering from its falling fragments.

A still more singular fact is related by D'Obsonville. An elephant, who, in the course of the last war between the French and the British in the East Indies, had received a flesh wound by a cannon ball, after being once or twice conducted

to the hospital to have his wound dressed, constantly attended of himself at the proper time, till it was healed. That the surgeon might operate, he readily extended himself on the ground. He bore with patience the application even of fire to his wound. The acuteness of the pain would sometimes force from him a plaintive groan. But to the hand, who, by inflicting momentary torments, sought to accomplish his cure, he expressed none but emotions of gratitude. Gratitude is indeed represented by all who have had opportunities of observing his manners, as the most eminent feature in the character of the elephant. At the sight or the cry of his master or benefactor in danger, he forgets all regard to his own safety.

At Pondicherry, a soldier, who had used to share his arrack with an elephant, whenever he received his pay, happening one day to get drunk, was pursued by the guard, who meant to put him into confinement. He retreated under the belly of his friend, the elephant; who, with his trunk, beat off his pursuers. The soldier fell asleep. When he awaked next day, having slept away his intoxication, he was much alarmed to find himself under the belly of so enormous an animal. The elephant, however, eased his fears by caressing him with his trunk, and dismissing him in the most friendly manner.

An elephant in Versailles was very carefully observed by the members of the French Academy of Sciences, and many other visitors.

He discovered considerable penetration, seemed to know when he was mocked, and waited for an opportunity to revenge the affront.

A man pretending to throw something into his mouth, made him gape for nothing. The disappointed elephant, in high resentment, knocked the wag down, and broke two of his ribs with a blow

of his trunk ; then trampled on him with his feet, and kneeling, endeavoured to pierce his belly with his tusks. He was, however, rescued.

A painter wanted to draw this same elephant in an unusual attitude, with his trunk elevated, and his mouth open. To make him remain in this position, an attendant threw fruits, from time to time, into his mouth. But he often only pretended to throw, without giving any. The elephant at length, teased and irritated, and observing that it was to gratify the painter the servant treated him with such impertinence, turned his eye upon the master and his work, and by squirting a quantity of water from his trunk, entirely spoiled the drawing.

The following instance of the sagacity of these animals was mentioned to Dr. Darwin, by some gentlemen of undoubted veracity, who had been much conversant with our Eastern settlements. The elephants that are used to carry the baggage of our armies, are put each under the care of one of the natives of Indostan ; and whilst this person and his wife go into the woods to collect leaves and branches of trees for his food, they fix him to the ground by a length of chain, and frequently leave a child, yet unable to walk, under his protection ; and the intelligent animal not only defends it, but, as it creeps about, when it arrives near the extremity of his chain, he wraps his trunk gently round its body, and brings it again into the centre of his circle.

In the last war, a young elephant received a violent wound in its head ; the pain of which rendered it so frantic and ungovernable, that it was found impossible to persuade the animal to have the part dressed. Whenever any one approached, it ran off with fury, and would suffer no person to come within several yards of it. The man who

had the care of it, at length hit upon a contrivance for securing it. By a few words and signs, he gave the mother of the animal sufficient intelligence of what was wanted ; the sensible creature immediately seized her young one with her trunk, and held it firmly down, though groaning with agony, while the surgeon completely dressed the wound ; and she continued to perform this service every day, till the animal was perfectly recovered.

In the Philosophical Transactions, a story is related of an elephant having such an attachment for a very young child, that he was never happy but when it was near him. The nurse used, therefore, very frequently to take the child in its cradle, and place between his feet. This he became at length so much accustomed to, that he would never eat his food except when it was present. When the child slept, he used to drive off the flies with his proboscis ; and when it cried, he would move the cradle backwards and forwards, and thus rock it again to sleep.

A sentinel, belonging to the present menagerie at Paris, was always very careful in requesting the spectators not to give the elephants any thing to eat. This conduct particularly displeased the female ; who beheld him with a very unfavourable eye, and had several times endeavoured to correct his interference, by sprinkling his head with water from her trunk. One day, when several persons were collected to view these animals, a by-stander offered the female a bit of bread. The sentinel perceived it ; but the moment he opened his mouth to give his usual admonition, she, placing herself immediately before him, discharged in his face a considerable stream of water. A general laugh ensued ; but the sentinel, having calmly wiped his face, stood a little on one side, and continued as vigilant as before. Soon afterwards, he



found himself under the necessity of repeating his admonition to the spectators ; but no sooner was this uttered, than the female laid hold of his musket, twirled it round with her trunk, trod it under her feet, and did not restore it till she had twisted it nearly into the form of a screw.

M. Navarette says, that at Macassar, an elephant-driver had a cocoa-nut given him, which, out of wantonness, he struck twice against the elephant's forehead to break. The day following the animal saw some cocoa-nuts exposed in the street for sale ; and taking one of them up with its trunk, beat it about the driver's head, till the man was completely dead.

That elephants are susceptible of the warmest attachment to each other, the following account, extracted from a late French journal, will sufficiently prove. Two Ceylonese elephants, a male and a female, each about two years and a half old, were in 1786 brought into Holland, a present to the stadtholder from the Dutch East India Company. They had been separated, in order to be conveyed from the Hague to Paris ; where, in the Museum of Natural History, a spacious hall was prepared for their reception. This was divided into two apartments, which had a communication by means of a large door, resembling a portcullis. The inclosure round these apartments consisted of very strong wooden rails. The morning after their arrival, they were conveyed to this habitation. The male was first brought. He entered the apartment with suspicion, reconnoitred the place, and then examined each bar separately with his trunk, and tried their solidity by shaking them. He attempted to turn the large screws on the outside which held them together, but was not able. When he arrived at the portcullis which separated the apartments, he observed that it was

fastened only by a perpendicular iron bar. This he raised with his trunk, then pushed up the door, and entered the second apartment, where he received his breakfast. These two animals had been parted, (but with the utmost difficulty,) for the convenience of carriage, and had not seen each other for some months; and the joy they experienced on meeting again, after so long a separation, is scarcely to be expressed. They immediately rushed towards each other, and sent forth cries of joy so animated and loud as to shake the whole hall. They breathed also through their trunks with such violence, that the blast resembled an impetuous gust of wind. The joy of the female was the most lively. She expressed it by quickly flapping her ears, which she made to move with astonishing velocity, and drew her trunk over the body of the male with the utmost tenderness. She particularly applied it to his ear, where she kept it a long time; and after having drawn it over his whole body, often moved it affectionately towards her own mouth. The male did the same over the body of the female, but his joy was more steady. He seemed, however, to express it by his tears, which fell from his eyes in abundance. Since this time they have occupied the same apartment; and their mutual tenderness and natural affection, have excited the admiration, and even the esteem, of all who have visited them.

These two elephants consume every day a hundred pounds weight of hay, and eighteen pounds of bread, besides several bunches of carrots, and a great quantity of potatoes. During summer they drink about thirty pails of water in the day. On their arrival in Holland, they were conveyed in a vessel up the river Waal to Nimeguen, whence they were driven on foot to Loo. The attendants had

much difficulty in inducing them to cross the bridge at Arnhem. The animals had fasted for several hours, and a quantity of food was placed for them on the opposite side of the bridge. Still, however, some time elapsed before they would venture themselves upon it; and at last they would not make any step, without first carefully examining the planks, to see that they were firm. During the time they were kept at Loo, they were perfectly tame, and were suffered to range at liberty. They would sometimes even come into the room at the dinner hour, and take food from the company. After the conquest of Holland, from the cruelty with which they were treated by many of the spectators who crowded to visit them, they lost much of their gentleness; and their subsequent confinement in the cages in which they were conveyed to Paris, has even rendered them in some degree ferocious towards spectators. They are not suffered to range at liberty; but are kept in an inclosure sufficiently large to allow them some exercise. This contains their den, and a pond, in which, during summer, they often wash themselves.

Dr. Darwin tells us, that he was informed by a gentleman of veracity, that, in some parts of the East the elephant is taught to walk on a narrow path between two pit-falls, which are covered with turf; and then to go into the woods and seduce the wild elephants to come that way, who fall into these wells, whilst he passes safe between them. The same gentleman says also that it was universally observed, that such wild elephants as had escaped the snare, always pursued the traitor with the utmost vehemence; and if they could overtake him, which sometimes happened, they beat him to death.

Elephants are said to be extremely susceptible of

the power of music. Suetonius relates that the emperor Domitian had a troop of elephants disciplined to dance to the sound of music ; and that one of them, who had been beaten for not having his lesson perfect, was observed the night afterwards in a meadow, practising it by himself.

At Paris some curious experiments have been lately made on the power of music over the sensibility of the elephant. A band of music went to play in a gallery extending round the upper part of the stalls in which were kept two elephants, distinguished by the names of Margaret and Hans. A perfect silence was procured. Some provisions, of which they were fond, were given them to engage their attention, and the musicians began to play. The music no sooner struck their ears, than they ceased from eating, and turned in surprise to observe whence the sounds proceeded. At sight of the gallery, the orchestra, and the assembled spectators, they discovered considerable alarm, as though they imagined there was some design against their safety. But the music soon overpowered their fears, and all other emotions became completely absorbed in their attention to it. Music of a bold and wild expression excited in them turbulent agitations, expressive either of violent joy, or of rising fury. A soft air performed on the *bassoon*, evidently soothed them to gentle and tender emotions. A gay and lively air moved them, especially the female, to demonstrations of highly sportive sensibility. Other variations of the music produced corresponding changes in the emotions of the elephants.

The natives of Africa greedily eat the flesh of the elephant. The Hottentots and Boshiesmen, in the neighbourhood of the Cape of Good Hope, esteem it a very agreeable article of food ; but the Dutch colonists regard the eater of elephant's

flesh with little less horror than a cannibal. Sparrman relates that he saw the huts of some Hottentots in the service of a farmer on Diep-rivier covered over with zig-zag slips of elephant's flesh, some inches in breadth, and several fathoms in length, which they had thus laid out to dry; some of those slips were wound round the huts, and others stretched between two. It was in the beginning of November; they had lately been successful in the chase; and "at this time," says this lively naturalist, "men, women, and children, had here no other employment, but sleeping, smoking, and eating elephant's flesh."

The tusks of the elephant have long been applied, under the denomination of ivory, to a variety of important uses, in the arts. Ivory is a material as well for the fine as for the mechanic arts. In the country of Sogno, in Lower Ethiopia, the natives distil a water from the bones of the elephant's legs, which they esteem an excellent remedy for asthmas, sciaticas, and several other complaints. The Giaghi regard the tail of this animal with religious veneration. When a chief or sovereign dies, an elephant's tail is consecrated to preserve his memory. The animal is hunted merely for his tail. A sacred tail must always have been cut off from a living elephant, and at a single stroke.

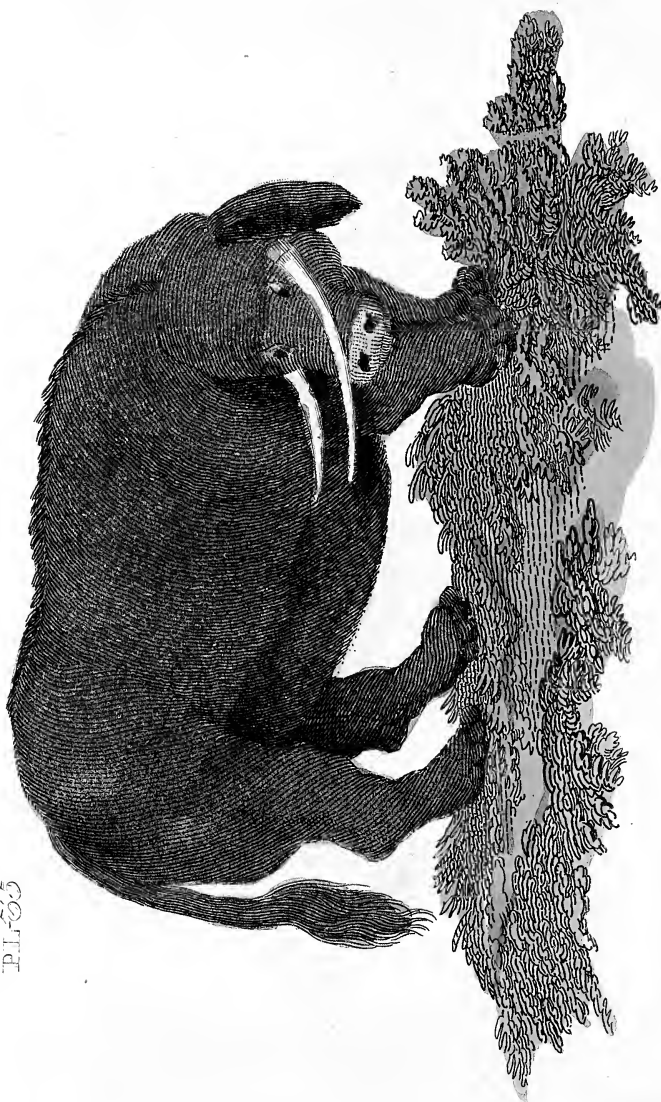
It is a most curious fact, and may well excite our astonishment, that skeletons resembling those of elephants are occasionally found in a fossil state, and in large quantities, at a great depth under the surface, in the most northern parts of Asia.

"All the arctic circle," says Mr. Pennant, "is a vast mossy flat, formed of a bed of mud or sand, seeming the effect of the sea, and which gives reason

to think that that immense tract was in some very distant age won from it. With them are mixed an infinitely greater number of marine bodies than are found in the higher parts of that portion of Asia. I give the fact: let others more favoured explain the cause how these animals were transported from their torrid seats to the arctic regions. I should have recourse to the only one we have authority for; and think that phenomenon sufficient. I mention this, because modern philosophers look out for a later cause; I rest convinced, therefore, to avoid contradicting what can never be proved."

We must by no means here omit the fossil bones, viz. jaws, vertebræ, thigh-bones, and tusks, which are often found in some part of North America; they are commonly found about five or six feet below the surface, on the banks of the river Ohio, not far from the river Miame, seven hundred miles from the sea-coast. Of these the thigh-bones are much thicker in proportion than in the common elephant; the grinders, or side teeth, are very different from those of the elephant, and instead of having a flat top with numerous transverse scores, as in that animal, are pretty deeply lobed, like the teeth of carnivorous animals; the tusks bear a great resemblance to those of the common elephant, but have an inclination to a spiral curve towards the smaller end; in their common texture they perfectly resemble common ivory. It seems, therefore, extremely clear, that this animal must have been a species differing from the common elephant, but greatly resembling it. Whether it may exist in any of the unexplored parts of the globe, must be left to future investigations to determine. These bones are not peculiar to the northern regions of America, but have also been found in







Siberia, in Peru, and in the Brasils ; and it has been remarked, that they are found at greater depths than the remains of the common elephant, in strata, which are supposed to be the remains of the old world after the event of the deluge.

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## SUKOTYRO.

THAT we may not seem to neglect so remarkable an animal, though hitherto so very imperfectly known, we shall here introduce the sukotyro. This, according to Niewhoff, its only describer, and who has figured it in his travels to the East Indies, is a quadruped of a very singular shape. Its size is that of a large ox ; and the snout like that of a hog ; the ears long and rough ; and the tail thick and bushy. The eyes are placed upright in the head, quite differently from those of other quadrupeds. On each side the head, next to the eyes, stand the horns, or rather teeth, not quite so thick as those of an elephant. This animal feeds upon herbage, and is but seldom taken. It is a native of Java, and is called by the Chinese, sukotyro.

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## PLATYPUS TRIBE.

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THE only animal at present known as belonging to this very extraordinary tribe, was discovered a few years ago, in New Holland. Sir Joseph Banks had in his possession two specimens, which

were sent over by Governor Hunter ; and only one or two others have as yet arrived in this kingdom.

The platypus has two grinders on each side, both of the upper and lower jaw. Instead of front teeth, it has a process resembling the bill of a duck. The feet are webbed.

#### DUCK-BILLED PLATYPUS.

THE mouth of this very singular creature exhibits so great a resemblance to the beak of some of the broad-billed species of ducks, that it is not without minute and accurate examination, that we can persuade ourselves of its being the real beak or snout of a quadruped.

The length of the animal, from the tip of the beak to the end of the tail, is thirteen inches ; and of this the beak occupies an inch and a half. The body is depressed, and has some resemblance to that of an otter in miniature ; it is covered with a very thick, soft fur, of a moderately dark brown colour above, and whitish beneath. The head is rather small ; and the tail flat, furry like the body, and obtuse. The legs are very short, and terminate in a broad web, which on the fore feet extends to a considerable distance beyond the claws. On the fore feet there are five claws, straight, strong, and sharp-pointed ; and on the hind feet six curved claws ; the interior one seated much higher than the rest, and resembling a strong sharp spur.

The specimens of this animal hitherto sent to Europe, have been deprived of their internal parts, and are for the most part very ill preserved. Mr. Home examined one belonging to sir Joseph Banks, which had been kept in spirits, and was tolerably perfect. He discovered that although the beak, when cursorily examined, had so great a resem-

DUCK BILLED PLATYPUS

PL 36





blance to that of the duck, as to induce a belief that it was calculated for exactly the same purposes ; yet when all its parts were carefully reviewed, he found that it differed in a variety of circumstances. This, it appears, is not the animal's mouth ; but is merely a projecture beyond, and added to it.

The cavity of the mouth is similar to that of other quadrupeds, and has two grinders on each side, both in the upper and under jaw : but instead of front-teeth, the nasal and palate bones are continued forward, lengthening the interior nostrils, and forming the upper part of the beak ; and the two portions of the lower jaw, instead of terminating, as in other quadrupeds, are also continued forwards, forming the under portion of the beak. This structure differs materially from the bills of all birds : since in the feathered tribe the cavities of the nostrils do not extend beyond the root of the bill ; and in the lower portions, which correspond with the under jaw of quadrupeds, the edges are hard, to answer the purpose of teeth, and in the middle there is an hollow space to receive the tongue ; but in the platypus, the two thin plates of bone are in the centre, and the parts that surround them are composed of skin and membrane, in which, probably, a muscular structure is included.

The teeth have no fangs that sink into the jaw, as in most other quadrupeds, but are embedded in the gums. The tongue is scarcely half an inch long, and the moveable part is not more than a quarter of an inch. It can be drawn entirely into the mouth ; and, when extended, reaches about a quarter of an inch into the beak. The organ of smell differs in some measure from that of both quadrupeds and birds. The external opening is placed near the end of the beak ; whence are superadded to it two cavities, extending all the

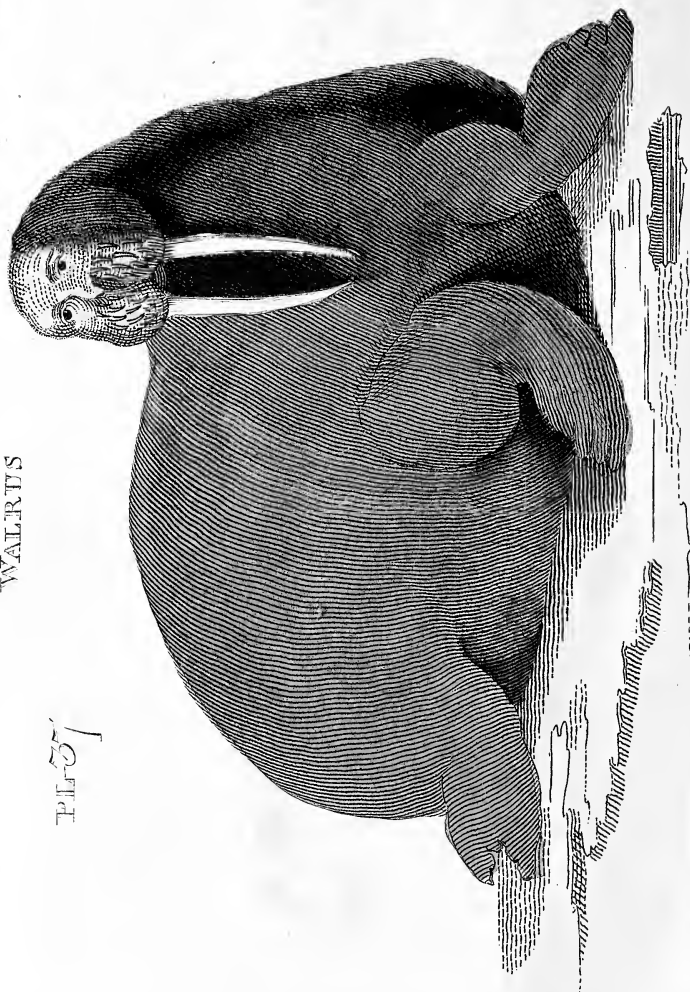
way along the beak. The beak itself is covered with a smooth black skin, that extends some way beyond the bones, both in front and laterally ; and forms a moveable lip, so strong, that when dried or hardened in spirit, it seems to be quite rigid ; but when moistened is very pliant, and is probably a muscular structure. The under portion of the beak has a lip equally broad with the upper. This has a serrated edge (wanting in the upper mandible), but the serræ are mostly confined to the soft part. A curious transverse fold of the external black smooth skin, by which the beak is covered, projects all round, exactly at that part where it has its origin. The apparent use of this is to prevent the beak from being pushed too far into the soft mud, in which prey may be concealed. The nerves that supply the beak, are much allied to those of birds ; and the cavity of the skull has a greater resemblance to that of a duck than of a quadruped. The eye is uncommonly small for the size of the animal ; and the external opening of the ear is simply an orifice, and so minute as not to be discovered without difficulty.

From the form of this animal, we are led to suppose it a resident in watery situations ; that it burrows in the banks of rivers, or under ground, and that its food consists of aquatic plants and animals. But the structure of its beak is such as not to enable it to lay firm hold of its prey : when, however, the two marginal lips are brought together, the animal has most probably a considerable power of suction, and in this manner may draw food into its mouth.



WALRUS

PL 37





## MANATI TRIBE.



THE animals of this tribe are destitute of fore teeth in both jaws. From the upper jaw, however, proceed two great tusks, which point downwards. The grinders have wrinkled surfaces. The lips are doubled. The hind feet are at the extremity of the body, and unite into a kind of fin.

The manati are entirely marine ; feeding on seaweeds, corallines, and shell-fish, and not carnivorous. Their elongated body, declining in bulk from the head gradually to the tail, and their short fin-like feet, give them some alliance to the fishy tribes. They may indeed be considered as forming one of those steps in nature, by which we are conducted from one great division of the animal world to the other. Though the general residence of all the species is in the sea, yet some of them are perfectly amphibious, and live with equal ease on the land and in water.

## ARCTIC WALRUS.

THESE animals, which are sometimes seen eighteen feet long, and ten or twelve in circumference, are inhabitants of the coasts of the Magdalene islands, in the gulph of St. Lawrence. They are usually found in vast multitudes floating on the ice. In their upper jaw they have two long tusks bending downwards, which they use in scraping shell-fish and other prey out of the sand, and from the rocks. The further use of these is in ascending the islands of ice, the animals fixing them in the cracks, and upon them drawing up their

bodies. They are also weapons of defence against the white bear, the sword-fish, and sharks.

The arctic walrus is inelegant in its form, having a small head, short neck, thick body, and short legs. The lips are very thick, and the upper one is cleft into two large rounded lobes, on which there are several thick and semi-transparent bristles. The eyes are very small; and instead of external ears there are only two small circular orifices. The skin is thick, and scattered over with short brownish hair. On each foot there are five toes connected by webs, and the hind feet are considerably broader than the others. The tail is extremely short.

They are harmless animals, unless when attacked or provoked, in which case they become furious, and exceedingly vindictive. When surprised on the ice, the females first provide for the safety of their young, by flinging them into the sea, and conveying them to a secure distance; they then return to the place with great rage, to revenge any injury they have received. They will sometimes attempt to fasten their teeth on the boats, in order to sink them, or will rise under them in great numbers, with the intention of oversetting them, at the same time exhibiting all the marks of rage, roaring in a dreadful manner, and gnashing their teeth with great violence. They are strongly attached to each other, and will make every effort in their power, even to death, to set at liberty their harpooned companions. A wounded walrus has been known to sink to the bottom, rise suddenly again, and bring up with it multitudes of others, who have united in an attack on the boat from whence the insult came.

These animals always visit the Magdalene islands early in the spring. These seem particularly

adapted to their wants, abounding in large shell-fish, and affording them a convenient landing. Immediately on their arrival, they crawl up the sloping rocks of the coast in great numbers, and frequently remain for many days, when the weather is fair, without food ; but on the first appearance of rain they immediately retreat to the water with great precipitation. Very soon after their arrival they bring forth their young. The inhabitants suffer them to come on shore, and amuse themselves for a considerable time, till they acquire some degree of boldness ; for, at first landing, they are so exceedingly timid as to suffer no one to approach them. In a few weeks they assemble in great numbers ; formerly, when undisturbed by the Americans, to the amount of seven or eight thousand. At a proper time the fishermen, taking advantage of a sea-wind to prevent the animals from smelling them, and with the assistance of dogs, endeavour in the night to separate those that are farthest advanced from those next the water, driving them different ways. This they call making a cut, and it is generally esteemed a very dangerous process, since it is impossible to drive them in any particular direction, and often difficult to avoid them. The darkness of the night, however, deprives them of every direction to the water, so that they stray about, and are killed by the men at leisure, those nearest the shore becoming the first victims. In this manner fifteen or sixteen hundred have been killed at one cut. They are then skinned, and the coat of fat that always surrounds them is taken off, and dissolved into oil. The skin is cut into slices of two or three inches wide, and exported to America for carriage traces, and to England for glue.

They sometimes attack small boats, merely through wantonness, and not only put the people

in confusion, but frequently subject them to great danger. In the year 1766 some of the crew of a sloop which sailed to the North, to trade with the Esquimaux, were attacked in their boat by a great number of these animals ; and, notwithstanding their utmost endeavours to keep them off, one, more daring than the rest, though a small one, got in over the stern, and after sitting and looking at the men some time, he again plunged into the water to his companions. At that instant, another, of an enormous size, was getting in over the bow ; and every other means proving ineffectual to prevent such an unwelcome visit, the bowman took up a gun loaded with goose shot, put the muzzle into the animal's mouth, and shot him dead. He immediately sunk, and was followed by all his companions. The people then made the best of their way to the vessel, and just arrived before the creatures were ready to make their second attack, which, in all probability, would have been infinitely worse than the first, as they seemed highly enraged at the loss of their companion.

The following is captain Cook's description of a herd of walrusses, that were seen floating on a mass of ice off the northern part of the continent of America. "They lie in herds of many hundreds upon the ice, huddling over one another like swine ; and roar or bray so very loud, that in the night, or in foggy weather, they gave us notice of the vicinity of the ice before we could see it. We never found the whole herd asleep, some being always upon the watch. These, on the approach of the boat, would wake those next to them ; and the alarm being thus gradually communicated, the whole herd would be awake presently. But they were seldom in a hurry to get away, till after they had been once fired at. They then would tumble over one another into the

sea in the utmost confusion. And if we did not, at the first discharge, kill those we fired at, we generally lost them, though mortally wounded. They did not appear to us to be that dangerous animal which some authors have described ; not even when attacked. They are rather more so in appearance than in reality. Vast numbers of them would follow and come close up to the boats ; but the flash of a musket in the pan, or even the bare pointing one at them, would send them down in an instant. The female will defend the young to the very last, and at the expence of her own life, whether in the water, or upon the ice. Nor will the young one quit the dam, though she be dead ; so that if one is killed, the other is certain prey. The dam, when in the water, holds the young one between her fore fins."

The Greenlanders, when they find a herd of them upon the ice, approach in their boats, and fling their harpoons as the alarmed animals are tumbling themselves along the steeps of the ice into the sea. They seize these opportunities of killing them, as the animals always distend their skins, to roll with greater ease and lightness, and, therefore, are easier to hit than when they are at rest on the shore, and the skin is flaccid.

When playing about in the water, they have been frequently observed to draw sea fowl beneath the surface, with their long tusks, and after a while to throw them up in the air ; but they live entirely upon marine plants and shell-fish, and never eat these.

This animal appears to have been known to king Alfred so early as the year 890, from the information of Ochter, the Norwegian, who made a voyage beyond the North Cape of Norway, " for the more commoditie," says Hakluyt, " of fishing of

*horse wales*, which have in their teeth bones of great price and excellence ; whereof he brought some on his returne unto the king." Hakluyt further informs us, that at that period the natives of the northern coasts made cables, some of them sixty ells in length, of the horse wales and seals skins.

The tusks of the walrus, which weigh from ten to thirty pounds each, are used as an inferior sort of ivory ; but the animals are principally for the sake of their oil. A very strong and elastic leather, it is said, may be prepared from the skin. The animals frequently weigh from fifteen hundred to two thousand pounds, and produce from one to two barrels of oil each.

#### INDIAN WALRUS.

HAS two canine teeth, or tusks, placed in the upper jaw, pretty close to each other, and four grinders on each side, at a little distance from these tusks ; in the lower jaw three grinders on each side.

It is found at the Cape of Good Hope, and among the Philippine isles ; but little satisfactory is yet known respecting the natural history of this animal.

#### WHALE-TAILED MANATI.

THE whale-tailed manati live entirely in the water, and in other respects they so nearly approach the whale tribe, as scarcely to deserve the name of quadrupeds. What are denominated feet are little more than pectoral fins, which serve only for swimming.

They inhabit the seas between America and Kamtschatka, but never appear off the coast of

Kamptschatka, unless driven there by a tempest. They are always found in herds. The old ones keep behind, and drive the young before them ; and some go along the sides, by way of protection. On the rising of the tide they approach the shores, and are so tame as to suffer themselves to be handled. They live in families near one another, each consisting of a male and female, a half grown young one, and a new born cub ; and these families often unite so as to form vast droves.

In their manners they are peaceable and harmless, and bear the strongest attachment to each other. When one is hooked, the whole herd will attempt its rescue ; some will strive to upset the boat by going beneath it ; others will fling themselves on the rope of the hook, and press it down in order to break it ; and others again will make the utmost efforts to wrench the instrument out of the body of their wounded companion.

In their conjugal affection, if such it may be termed, they are most exemplary. A male, after having used all his endeavours to release his mate, which had been struck, pursued her to the very edge of the water ; and no blows that were given could force him away. As long as the deceased female continued in the water, he persisted in his attendance ; and even for three days after she was drawn on shore, cut up, and carried away, he was observed to remain in expectation of her return.

They are taken by a great hook fastened to a long rope. The strongest man in the boat strikes the instrument into the nearest animal ; which being done, twenty or thirty people on shore seize the rope, and with the greatest difficulty drag it on shore. The poor creature makes the strongest resistance, assisted by its faithful companions. It will cling with its feet to the rocks till it leaves the skin

behind ; and often great fragments fly off before it can be landed. " I once saw " says Dr. Grieve, " some of the fishermen cut off the flesh from one of them while it was alive, which all the while struck the water with such force with its paws, as entirely to tear off the skin."

The size is enormous, some of them being twenty-eight feet long, and weighing so much as eight thousand pounds. They are exceedingly voracious, and feed on the different species of fuci that grow in the sea, and are driven to the shore. When filled they fall asleep on their backs. During their meals, they are so intent on their food, that any one may go among them, and select out one of their number. Their back and sides are generally above water.

The head is small. The lips are double ; and, near the junction of the two jaws, the mouth is filled with white tubular bristles, which prevent the food from running out with the water, and also serve for cutting teeth, to divide the strong roots of the sea-plants. Two flat white bones with undulated surfaces, one in each jaw, supply the place of grinders. The eyes are extremely small, as are also the orifices of the ears. The tail is thick and strong ; ending in a black, stiff fin. The skin is thick, hard, and black, and full of inequalities, like the bark of oak ; beneath it there is thick blubber.

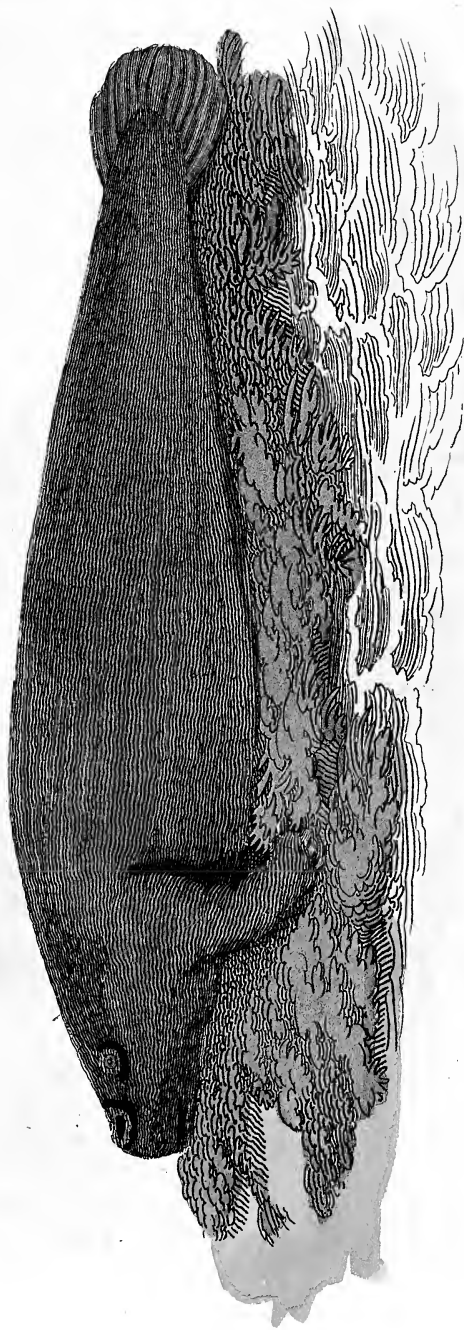
The flesh is coarser than beef, and does not soon putrify. The young ones taste like veal.

#### ROUND-TAILED MANATI.

THESE animals are about six feet long ; and three or four in circumference, though sometimes much more. They have a short thick neck, small eyes, and thick lips ; are very thick about



ROUND TAILED TRICHECHUS  
ELC8





the shoulders, and taper gradually to the tail, which is broad and round. The feet are placed at the shoulders; and near the base of each foot, in the female, there is a small teat. The skin is thick and hard, and has a few hairs scattered over it.

They are found in the African rivers, from Senegal to the Cape; and in abundance on some of the eastern coasts of South America. In the river of Amazons, they are often seen nearly a thousand leagues from its mouth. They seem much more partial to fresh, or only brackish water, than to the sea.

At times they are observed, in their frolicsome moods, to leap to great heights above the surface; and they delight in shallow water near low land, and in places secure from surges, where the tides run gently. Marine plants seem to constitute their principal food. They are taken by harpoons. The Indians go out in small canoes, with the utmost silence, (for the animal is very quick of hearing), carrying a harpoon, fastened to a strong cord of several fathoms in length. When struck, the manati swims off with the instrument of death in his body; and, when spent with pain and fatigue, again rises to the surface, and is taken. The affection of the parent for her young is as conspicuous in this as in the last species. If a young one is with its mother when she is struck by a fisherman, careless of her own sufferings, she affectionately takes it, if not too large, under her fins or feet, to protect it from her own fate. But how cruelly do mankind reward them for these tender offices! The young, which will never forsake its dam, even in the greatest distress, is looked upon in no other light than as certain prey.

We are told that this species of manati is often tamed by the native inhabitants of America, and

that it delights in music. A governor of Nicaragua is said to have kept one of them in a lake near his house, for six-and-twenty years. The animal was usually fed with bread, and fragments of victuals, as fish are fed in a pond. He became so familiar, that in tameness and docility he nearly equalled what has been said by the ancients of their dolphin. The domestics gave him the name of Matto; and when any of them came at the regular hour to feed him, and called him by his name, he would come immediately to the shore, take victuals out of their hands, and, (though contrary to what is generally said of these creatures,) even crawl up to the house to receive it. Here he would play with the servants and children; and, according to the writer of the account, has even been known to carry persons across the lake on his back. From circumstances similar to these, some authors have imagined this to be the dolphin of the ancients; and others believe that what has been written respecting mermaids and syrens, should be referred to this animal.

The flesh and fat of the round-tail manati are very white, sweet, and salubrious. The young are extremely tender and delicious. The thicker parts of the skin, cut into slips, and dried, become very tough, and are used for whips. The thinner parts, which are more pliant, serve the Indians as thongs for fastening the sides of their canoes.

#### GUIANA MANATI.

THIS is a native of Guiana, inhabiting the large rivers, as well as the sea; and grows to the length of sixteen or eighteen feet; the skin is of a dark brown, with scattered hairs on it. The head hangs downward; the feet have five toes; the body

continues of nearly the same thickness almost to the tail, where it suddenly narrows; the tail is flat, and of the shape of a spatula; thickest in the middle, and thinner towards the edges.

## SEA-APE MANATI.

THIS animal, though placed among the manati by Mr. Pennant, seems rather to belong to the next order, and to be a seal. The following is Dr. Grieve's account of it. Mr Steller saw off the coast of America, a marine animal which he calls a sea-ape. The head appeared like that of a dog; with sharp and upright ears, large eyes, and with both lips bearded. The body was round and conoid, the thickest part near the head; and the tail was forked. The animal was apparently destitute of feet.

It was extremely wanton, and played a number of apish-tricks. It sometimes swam on one and sometimes on the other side of the ship, gazing at it with great admiration. It would often stand erect for a considerable time, with one-third of its body above the water; then dart beneath the ship and appear on the other side, and repeat the same thirty times together. It would frequently rise with a sea plant in its mouth, not unlike the bottle-gourd, and toss it up and catch it again, playing with it a thousand antics.

From this animal, much more probably than from the round-tailed manati, the fable of the Syrens might originate.

## SEALS.

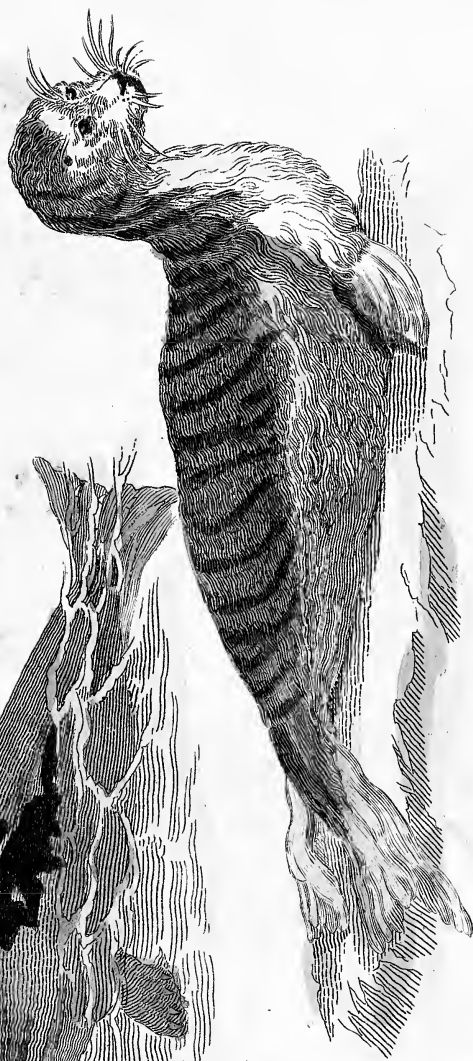
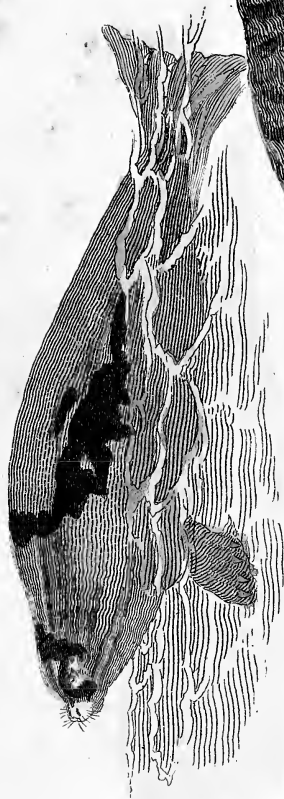
THE seals seem to bear a considerable alliance to the manati ; most of them having the same kind of elongated body, and fin-like feet. They also inhabit the waters, where they swim with great ease. In summer they live much on the shores, but in winter they confine themselves almost entirely to the sea. They are a dirty, and an inquisitive race of animals ; and though courageous and quarrelsome among themselves, are capable of being rendered tame. They are polygamous, one male having many females. Their flesh is said to be juicy and delicate eating ; and their fat and hides are of considerable use. They walk very awkwardly ; from the fore paws being set considerably backwards, and the hind ones being united. Their food consists of fish and other marine productions.

In the upper jaw they have six parallel and sharp-pointed fore teeth, the exterior of which are the largest ; and in the lower jaw four, that are also parallel, distinct, and equal. There is one canine-tooth in each jaw ; and five grinders above, and six below, all of which have three knobs, or points.

## COMMON SEAL, OR SEA-CALF.

THESE seals are found on most of the rocky shores of Great Britain and Ireland, especially on the northern coasts. They inhabit all the European seas, even to the farthest north ; are found considerably within the arctic circle, in the seas both of Europe and Asia, and even continue to those of Kamtschatka. They prey on fish, and are both

HARP SEAL



COMMON SEAL





excellent swimmers and ready divers. Their usual length is five or six feet. The head is large and round; the neck small and short; and on each side of the mouth there are several strong bristles. From the shoulders the body tapers to the tail. The eyes are large; there are no external ears. The legs are very short; and the hinder ones placed so backward, as to be but of little use, except in swimming. The feet are all webbed. It has five toes on each foot, with sharp strong claws. Its hind feet are more widely webbed than the fore. The tail is very short. The animals vary in colour; their short thick set hair being sometimes grey, sometimes brown or blackish, and sometimes even spotted with white or yellow.

It has been often remarked, that all animals are sagacious in proportion to the size of their brain. It has, in support of this opinion, been alleged, that man, with respect to his bulk, has of all others the largest. In pursuance of this assumption, some erroneous speculations have been formed. But, were the size of the brain to determine the quantity of the understanding, the seal would, of all other animals, be the most sagacious; for it has, in proportion, the largest brain of any, even man himself not excepted. However, this animal is possessed of but very few advantages over other quadrupeds; and the size of its brain furnishes it with few powers that contribute to its wisdom or its preservation.

This animal differs in the formation of its tongue from all other quadrupeds. It is forked or slit at the end, like that of serpents; but for what purpose it is thus singularly contrived we are at a loss to know. We are much better informed with respect to another singularity in its conformation, which is, that the foramen ovale

in the heart is open. Those who are in the least acquainted with anatomy, know, that the veins uniting bring their blood to the heart, which sends it into the lungs, and from thence it returns to the heart again, to be distributed through the whole body. Animals, however, before they are born, make no use of their lungs ; and therefore their blood, without entering their lungs, takes a shorter passage through the very partition of the heart, from one of its chambers to the other ; thus passing from the veins directly into those vessels that drive it through the whole frame. But the moment the animal is brought forth, the passage through the partition, which passage is called the foramen ovale, closes up, and continues closed for ever ; for the blood then takes its longest course through the lungs to return to the other chamber of the heart again. Now the seal's heart resembles that of an infant in the womb, for the foramen ovale never closes ; and although the blood of this animal commonly circulates through the lungs, yet it can circulate without their assistance, as was observed above, by a shorter way. From hence, therefore, we see the manner in which this animal is adapted for continuing under water ; for, being under no immediate necessity of breathing, the vital motions are still carried on while it continues at the bottom ; so that it can pursue its prey in that element, and yet enjoy all the delights and advantages of ours.

The water is the seal's usual habitation, and whatever fish it can catch its food. Though not equal in instinct and cunning to some terrestrial animals, it is greatly superior to the mute tenants of that element in which it chiefly resides. Although it can continue for several minutes under water, yet it is not able, like fishes, to remain

there for any length of time ; and a seal may be drowned, like any other terrestrial animal. Thus it seems superior, in some respects, to the inhabitants of both elements, and inferior in many more. Although furnished with legs, it is in some measure deprived of all the advantages of them. They are shut up within its body, while nothing appears but the extremities of them, and these furnished with very little motion, but to serve them as fins in the water. The hind feet, indeed, being turned backwards, are entirely useless upon land ; so that when the animal is obliged to move, it drags itself forward like a reptile, and with an effort more painful. For this purpose it is obliged to use its fore feet, which, though very short, serve to give it such a degree of swiftness that a man cannot readily overtake it ; and it runs towards the sea. As it is thus awkwardly formed for going upon land, it is seldom found at any distance from the sea-shore, but continues to bask upon the rocks ; and, when disturbed, always plunges down at once to the bottom.

The seal is a social animal, and wherever it frequents numbers are generally seen together. In the North and Icy seas they are particularly numerous. It is on those shores, which are less inhabited than ours, and where the fish resort in greater abundance, that they are seen by thousands, like flocks of sheep, basking on the rocks, and suckling their young. There they keep watch like other gregarious animals ; and, if an enemy appear, instantly plunge altogether into the water. In fine weather they more usually employ their time in fishing ; and generally come on shore in tempests and storms. The seal seems the only animal that takes delight in these tremendous conflicts of nature. In the midst of thunders and torrents, when every other creature

takes refuge from the fury of the elements, the seals are seen by thousands sporting along the shore, and delighted with the universal disorder ! This, however, may arise from the sea being at that time too turbulent for them to reside in ; and they may then particularly come upon land when unable to resist the shock of their more usual element.

As seals are gregarious, so they are also animals of passage, and perhaps the only quadrupeds that migrate from one part of the world to another. The generality of quadrupeds are contented with their native plains and forests, and seldom stray, except when necessity or fear impels them. But seals change their habitation ; and are seen in vast multitudes directing their course from one continent to another. On the northern coasts of Greenland they are seen to retire in July, and to return again in September. This time it is supposed they go in pursuit of food. But they make a second departure in March to cast their young, and return in the beginning of June, young and all, in a great body together, observing in their route a certain fixed time and track, like birds of passage. When they go upon this expedition, they are seen in great droves, for many days together, making towards the north, taking that part of the sea most free from ice, and going still forward into those seas where man cannot follow. In what manner they return, or by what passage, is utterly unknown ; it is only observed, that when they leave the coasts to go upon this expedition, they are all extremely fat, but on their return, they come home excessively lean.

The females, in our climate, bring forth in winter, and rear their young upon some sand-bank, rock, or desolate island, at some distance

from the continent. When they suckle their young they sit up on their hinder legs, while these, which are at first white with woolly hair, cling to the teats, of which there are four in number, near the navel. In this manner the young continue in the place where they are brought forth, for twelve or fifteen days ; after which the dam brings them down to the water, and accustoms them to swim and get their food by their own industry. As each litter never exceeds above three or four, so the animal's cares are not much divided, and the education of her little ones as soon completed. In fact, the young are particularly docile ; they understand the mother's voice among the numerous bleatings of the rest of the old ones ; they mutually assist each other in danger, and are perfectly obedient to her call. Thus early accustomed to subjection, they continue to live in society, hunt and breed together, and have a variety of tones by which they encourage to pursue, or warn each other of danger. Some compare their voices to the bleating of a flock of sheep, interrupted now and then by the barking of angry dogs, and sometimes the shriller notes of a cat. All along the shore, each has its own peculiar rock, of which it takes possession, and where it sleeps when fatigued with fishing, uninterrupted by any of the rest. The only season when their social spirit seems to forsake them, is that when they feel the influences of natural desire. They then fight most desperately ; and the male that is victorious keeps all the females to himself. Their combats, on these occasions, are managed with great obstinacy, and yet great justice ; two are never seen to fall upon one together ; but each has its antagonist, and all fight an equal battle, till one alone becomes victorious.

We are not certainly informed how long the females continue pregnant ; but if we may judge from the time which intervenes between their departure from the Greenland coasts and their return, they cannot go above seven or eight months at the farthest. How long this animal lives is also unknown : a gentleman, whom Dr. Goldsmith knew in Ireland, kept two of them, which he had taken very young, in his house for ten years ; and they appeared to have the marks of age at the time he saw them, for they were grown grey about the muzzle ; and it is very probable they did not live many years longer. In their natural state the old ones are seen very fat and torpid, separated from the rest, and, as it should seem, incapable of procreation.

As their chief food is fish, so they are very expert at pursuing and catching it. In those places where the herrings are seen in shoals, the seals frequent and destroy them by thousands. When the herring retires, the seal is then obliged to hunt after fish that are stronger and more capable of evading the pursuit : however, they are very swift in deep waters, dive with great rapidity, and, while the spectator eyes the spot at which they disappear, they are seen to emerge at above a hundred yards distance. The weaker fishes, therefore, have no other means to escape their tyranny, but by darting into the shallows. The seal has been seen to pursue a mullet, which is a swift swimmer, and to turn it to and fro, in deep water, as a hound does a hare on land. The mullet has been seen trying every art of evasion ; and at last swimming into shallow water in hopes of escaping. There, however, the seal followed ; so that the little animal had no other way left to escape, but to throw itself on one side, by which means it darted into shoaler water than it could

have swam in with the belly undermost ; and thus at last it got free.

The seal is taken for the sake of its skin, and for the oil its fat yields. The former sells for about four shillings ; and, when dressed, it is very useful in covering trunks, making waist-coats, shot-pouches, and several other conveniences. The flesh of this animal formerly found place at the tables of the great. At a feast provided by archbishop Neville, for Edward IV. there were twelve seals and porpoises provided among other extraordinary rarities.

In swimming, the seals always keep their head above water. They sleep on the rocks ; and are extremely watchful, never sleeping long without moving ; seldom longer than a minute ; they then raise their heads, and if they see or hear nothing more than ordinary, again lie down, and so on, raising their heads a little, and inclining them alternately at intervals of about a minute. Nature seems to have given them this precaution, as being unprovided with auricles or external ears ; and consequently not hearing very quick, nor from any great distance.

Seals, if taken young, are capable of being tamed ; they will follow their master like a dog, and come to him when called by the name that is given to them. Some years ago a young seal was thus domesticated ; it was taken at a little distance from the sea, and was generally kept in a vessel full of salt water ; but sometimes was allowed to crawl about the house, and even to approach the fire. Its natural food was regularly procured for it ; and it was taken to the sea every day, and thrown in from a boat. It used to swim after the boat, and always allowed itself to be taken back. It lived thus for several weeks ; and probably would have lived much longer, had it not been

sometimes too roughly used. A seal that was exhibited in London, in the year 1750, answered to the call of his keeper and attended to whatever he was commanded to do. He would take food from the man's hand, crawl out of the water, and, when ordered, stretch himself out at full length on the ground. He would thrust out his neck and appear to kiss the keeper, as often as the man pleased; and, when he was directed, would again return into the water. The following is an interesting communication on this subject from Dr. Hamilton of Ipswich: "Some time ago, a farmer of Aberdown, a town on the Fife-shire side of the banks of the Frith of Forth, in going out among the rocks to catch lobsters and crabs, discovered a young seal, about two feet and a half long, which he brought home. He offered him some pottage and milk, which the animal greedily devoured. It was fed in this manner for three days; when the man's wife, considering it an intruder in her family, would not suffer it to be kept any longer. Taking some men of the town along with him for the purpose, he threw it into the sea; but notwithstanding all their endeavours, it persisted in returning to them. It was agreed that the tallest of the men should walk into the water as far as he could, and having thrown the animal in, they should hide themselves behind a rock at some distance. This was accordingly done; but the affectionate creature returned from the water, and soon discovered them in their hiding place. The farmer again took it home, where he kept it for some time; but at length growing tired of it, he had it killed for the sake of its skin.

The seals are taken generally in October, or the beginning of November. The hunters, provided with torches and bludgeons, enter the mouths of



the caverns where the seals reside about midnight, and row in as far as they can. They then land ; and, being properly stationed, begin by making a great noise which alarms the animals, and brings them down from all parts in a confused hurry, uttering frightful shrieks and cries. In this hazardous employment, much care is necessary on the part of the hunters, to avoid the throng, which presses down upon them with great impetuosity, and bears away every thing that opposes its progress ; but when the first crowd has passed, they kill great numbers of young ones, which generally straggle behind, by striking them on the nose, where a very slight blow soon destroys them.

To the inhabitants of Greenland the different species of seals are indispensably necessary towards their existence. The sea is to them, what corn-fields are to us ; and the seal fishery is their most copious harvest. The flesh supplies them with their principal, most palatable, and substantial food. Their fat furnishes them with oil for their lamps and fires ; they use it also with their food ; and barter it for other necessities with the factor. They find the fibres of the sinews better for sewing with than thread or silk. Of the skins of the entrails they make their windows, curtains for their tents, and shirts ; and part of the bladders they use in fishing, as buoys or floats to their harpoons. Of the bones they formerly made all those instruments and working tools that are now supplied to them by the introduction of iron. Even the blood is not lost ; for they boil that, with other ingredients, as soup. Of the skins they form clothing, coverings for their beds, houses, and boats, and thongs and straps of every description. To be able to take seals, is the height of the Greenlander's desires and pride ; and to this labour, which is in truth an arduous one, they

are trained from their childhood. By this they support themselves ; by this they render themselves agreeable to each other, and become beneficial members of the community.

The hunting of this animal also evinces the courage and enterprize of the Finlander. The season for this chase begins when the sea breaks up, and the ice floats in shoals upon the surface. Four or five peasants will go out to sea in one small open boat, and often continue more than a month absent from their families. Thus do they expose themselves to all the horrors of the northern seas, having only a small fire, which they kindle on a sort of brick earth, and living on the flesh of the seals which they kill. The fat and skins are what they bring home. The perils with which these voyagers have to struggle are almost incredible. They are every instant betwixt masses of ice, which threaten to crush their little bark to atoms. They get upon the floating shoals ; and creeping along them, steal cautiously upon the seal, and kill him as he reposes on the ice. The following narrative will represent the extreme danger of this employment.

A few years ago, two Finlanders set out in a boat together. Having got sight of some seals on a little floating island, they quitted their boat, and mounted the ice, moving on their hands and knees to get near them without being perceived. They had previously fastened their boat to the little island of ice which they disembarked upon ; but while they were busily engaged in the pursuit, a gust of wind tore it away ; and, meeting with other shoals, it was broken to pieces, and in a few minutes entirely disappeared. The hunters were aware of their danger only when it was too late. They were now left without help, without any resource, and without even a ray of hope, on their

floating island. They remained two weeks on this frail territory. The heat, which diminished its bulk, and also its prominent surface, rendered their situation more alarming every moment. In the anguish of hunger they gnawed the flesh off their arms. At last they embraced each other, resolved to plunge together into the sea, and thus end their misery, for they had no prospect of escaping. The fatal resolution was just made, when they discovered a sail. One of them stripped off his shirt, and suspended it on the muzzle of his gun. The signal was observed from the vessel, which was a whale fisher. A boat was put out to assist them, and by this providential circumstance they were saved, from otherwise inevitable destruction.

The Icelanders fancy that seals are the offspring of Pharaoh and his host, who, they believe, were transformed into these animals in the Red Sea.

#### PIED SEAL.

THIS species, which resembles in manners the common seal, and like that is easily tamed, is found on the coasts of the Adriatic, and visits the British shores. It sometimes grows to the length of seven feet and a half.

The principal difference between this and the former species, consists in its having the nose long and taper ; the fore feet inclosed in a membrane, but very distinct ; the claws long and straight ; the hind feet very broad ; five distinct toes, with the claws just extending to the borders of the membrane, which expands in the form of a crescent. Its colours are black and white, variously disposed.

## MEDITERRANEAN SEAL

HAS a small head, and a neck longer than that of the common seal. The orifices of its ears are not larger than a pea ; its hair is short and rude, dusky, and spotted with ash colour. The toes on its fore feet are furnished with nails ; the hind feet are formed like fins, and are without nails. It is about eight feet and a half long, and five feet round. When placed on its back, the skin of its neck folds like a monk's hood. It inhabits the Mediterranean.

## LONG-NECKED SEAL

HAS a slender body, the length of which, from the nose to the fore legs, is equal to that from the fore legs to the tail. Its fore feet resemble fins, and have no claws. Native place uncertain.

## FALKLAND ISLE'S SEAL

Is about four feet long. It is covered with short ash coloured hair, tipped with dirty white ; its short nose is beset with strong black bristles ; it has short narrow pointed little ears ; no claws on the fore feet ; but on the toes of the hind feet there are four long and straight claws. They are found also as far distant as New Zealand.

## TORTOISE-HEADED SEAL

HAS its head resembling that of a tortoise, its neck slenderer than its head and body ; its feet are like those of the common seal. It is found on the shores of many parts of Europe.

## RIBBON SEAL OF THE KURILE ISLES

HAS very short fine bristly hair, of an uniform colour, almost black, marked along the sides, and towards the head and tail, with a stripe of a pale yellow colour, exactly resembling a ribbon, laid on it by art. Size unknown.

## LEPORINE SEAL

Is covered with fur, soft as that of a hare, upright and interwoven, of a dirty white colour. Its whiskers are long and thick, so that the animal appears bearded ; its head is long ; its upper lip is thick ; it has four cutting teeth both above and below ; and nails on both the fore and hind feet. Its usual length is six feet and a half ; its greatest circumference five feet two. It inhabits the White sea during the summer ; and is found also off Iceland, and on the coast of Spitzbergen.

## GREAT SEAL

RESEMBLES the common, but grows to the length of twelve feet. It inhabits the north of Scotland, and the south of Greenland.

## ROUGH SEAL

Is covered with bristly hair of a pale brown, intermixed like that of a hog. It inhabits Greenland. The natives make garments of its skin, turning the hairy side inmost. This is perhaps what our Newfoundland seal-hunters call square phipper, whose coat, they say, is like that of a water dog, and weighs sometimes five hundred pounds.

## HOODED SEAL

HAS a strong folded skin on its fore-head, which it can fling over its eyes and nose, to defend them against stones and sand in stormy weather. Its hair is white, with a thick coat of black wool under it, which makes it appear of a fine grey. It inhabits only the south of Greenland and Newfoundland. The hunters affirm they cannot kill it till they remove the integument on the head.

## HARP SEAL

HAS a pointed head, and a thick body of a whitish grey colour, marked on the sides with two black crescents, the horns pointing upwards towards each other. It attains this mark only in its fifth year; till this period it changes its colour annually, and is called by different names each year. Its head joins the body without any visible neck, which gives the animal a clumsy appearance.

It inhabits Greenland, Newfoundland, Iceland, the White Sea, the Frozen Ocean, and passes through the Asiatic Strait as far as Kamtschatka. It is the most valuable kind of any, both for its skin and oil. It grows to the length of nine feet

## LITTLE SEAL,

ABOUT two feet four inches long, has soft smooth hair, longer than that of the common seal, dusky on the head and back, and brownish beneath; its teeth above are bifurcated, and two of them below are three pointed.

## PORCINE SEAL.

IN its general form this species resembles the ursine seal, but the nose is longer, and formed like that of a hog. It has also five distinct toes covered with a common membrane. It inhabits the coast of Chili, and is a rare species.

## YELLOW SEAL, OR EARED SEAL.

THE eared seal appears to be a rare species, and is smaller than most of the genus, not much exceeding the length of two feet from the nose to the tail ; and from the same place to the extremity of the hind feet about two feet and a half. Its colour an uniform pale yellow or deep cream colour, without any variegation. The head is rather small, and the nose somewhat pointed ; the ears are about an inch long, and are very narrow and pointed, and are somewhat leaf shaped ; the vibrissæ or whiskers long and whitish ; the teeth are rather blunt than sharp, and the two middle incisores or front teeth of the lower jaw are slightly emarginated. The fore feet are pinniform, and without any appearance of toes or claws, and in shape somewhat resemble the fore fins of a turtle ; the hind feet are strongly webbed, and have long and very distinct claws, of which the three intermediate are much larger than the exterior ones ; the tail is about an inch in length.

## URSINE SEAL.

THE ursine seals are inhabitants of the islands in the neighbourhood of Kamtschatka. Here they are seen from June to September, during

which time they breed and educate their young. They are said then to quit their stations, and return, some to the Asiatic, and some to the American shore, generally, however, keeping between lat.  $50^{\circ}$  and  $56^{\circ}$ .

The males are about eight feet in length, and weighing eight hundred pounds, but the females are much smaller. Their bodies are thick, decreasing somewhat towards the tail. The nose projects like that of a pug dog; and the eyes are large and prominent. The fore legs are about two feet long; and the feet are formed with toes, which are covered with a naked skin, and have only the rudiments of nails, bearing somewhat the appearance of turtle's fins. The hind legs are rather shorter; but so fixed behind, that the animal can occasionally rub his head with them; these have five toes, separated by a web. The general colour of the hair is black; but that of the old ones is tipped with grey. The females are ash coloured.

The ursine seals live in families. Every male is surrounded by a seraglio of from eight to fifty mistresses, whom he guards with the utmost jealousy. Each family keeps separate from the others, although they lie by thousands on the shores where they inhabit. These animals also swim in tribes when they take to the sea. The males exhibit great affection towards their young, and equal tyranny towards the females. They are fierce in the protection of the former; and, should any one attempt to carry off their cub, they will stand on the defensive, while the female conveys it away in her mouth. Should she happen to drop it, the male instantly quits his enemy, falls on her, and beats her against the stones till he leaves her for dead. As soon as she recovers, she crawls to his feet in the most



suppliant manner, and washes them with her tears ; he, at the same time, brutally insults her misery, stalking about in the most insolent manner. But if the young is entirely carried off, he melts into the greatest affliction, shedding tears, and shewing every mark of sorrow.

Those animals that, through age or impotence, are deserted by the females, withdraw themselves from society, and grow excessively splenetic, peevish, and quarrelsome ; they become very furious, and so attached to their own stations, as to prefer even death to the loss of them. If they perceive another animal approaching them, they are instantly roused from their indolence, snap at the encroacher, and give him battle. During the fight, they insensibly intrude on the station of their neighbour, who then joins in the contest ; so that at length the civil discord spreads through the whole shore, attended with hideous growls, their note of war. Mr. Steller, and his men, in order to try the experiment, wantonly attacked one of these seals, put out both his eyes, and irritated four or five of his neighbours by throwing stones at them. When these pursued him he ran towards the blind animal, who, hearing them approach, fell upon them with the utmost fury. Mr. Steller escaped to an adjoining eminence, from whence he observed the battle, which raged for several hours. The blind seal attacked, without distinction, both friends and enemies ; till, at length, the whole herd, taking part against him, allowed him no rest, either on shore or in the sea, out of which they more than once dragged him to land, till he was dead.

This is one of the causes of disputes among these irritable creatures. But the most serious one is when an attempt is made to seduce any of their mistresses, or a young female of the

family ; a battle is the sure consequence of the insult. The unhappy vanquished animal instantly loses his whole seraglio, who desert him for the victorious hero.

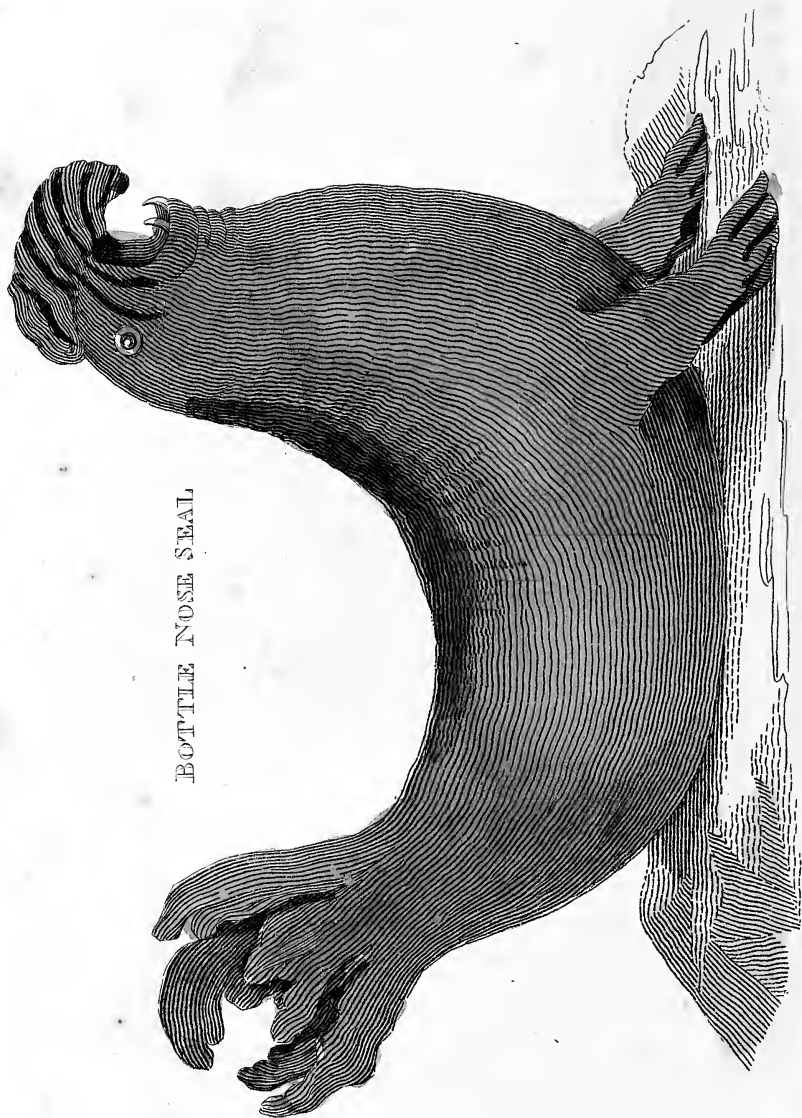
When only two of them are engaged, they rest at intervals, lying down near each other ; then, rising both at once, renew the battle. They fight with their heads erect, and turn them aside to avoid the blows. As long as their strength continues equal, they only use their fore paws ; but the moment one of them fails, the other seizes him with his teeth, and throws him upon the ground. The wounds they inflict are very deep, and like the cut of a sabre ; and, it is said, that in the month of July scarcely one is to be seen that has not some mark of this sort. At the conclusion of an engagement, such as are able throw themselves into the sea to wash off the blood. They are exceedingly tenacious of life, and will live a fortnight after receiving such wounds as would soon destroy any other animal.

Besides their notes of war, they have several others. When they lie on the shore, and are diverting themselves, they low like a cow. After victory they make a noise somewhat like the chirping of a cricket ; and on a defeat, or after receiving a wound, they mew like a cat.

When they come out of the water, they shake themselves, and smooth their hair with their hind feet ; apply their lips to those of the females, as if to kiss them ; lie down and bask in the sun with their hind legs up, which they wag as a dog does his tail. Sometimes they lie on their back : and sometimes roll themselves up into a ball, and thus fall asleep. They often swim on their back, and so near the surface of the water, as frequently to have their hind paws quite dry. When they go from the shore into the water, or when they



BOTTLE NOSE SEAL



dive, after having breathed, they, in the manner of some other sea animals, whirl themselves round like a wheel. They cut through the waves with great rapidity, frequently swimming at the rate of seven or eight miles an hour. Their cubs are as sportive as puppies; they have mock fights, and tumble one another on the ground. The male parent looks on with a sort of complacency, parts them, licks and kisses them, and seems to take a greater affection to the victor than to the other.

On Bering's island these animals were found in such numbers as to cover the whole shore; and travellers were obliged, for their own safety, to leave the sands and level country, and go over the hills and rocky parts. It is, however, remarkable, that they only frequent that part of the coast which is towards Kamtschatka. In the beginning of June they retire to the southward, to bring forth their young; and return towards the end of August. They seldom produce more than a single young one, which they nurse for three months.

The flesh of the old males is rank, but that of the females and young is said to be exceedingly good. The skins of the young ones, cut out of the bellies of the females, are in esteem for clothing, and are nearly as valuable as those of the old animals.

#### BOTTLE-NOSED SEAL.

THE male of this species measures from fifteen to twenty feet in length; and is distinguished from the female by a large snout, projecting five or six inches below the end of the upper jaw. This snout the animal inflates when he is irritated, giving it thus the appearance of an arched or hooked nose. The skin is scattered over with a rust-coloured hair. The feet are short, and the hinder ones so webbed

as to appear like fins. In the upper jaw there are only four front teeth, and in the lower jaw no more than two. These animals are found in the seas about New Zealand, on the island of Juan Fernandez, and the Falkland Islands.

Their fat is so very considerable, as to lie at least a foot deep between the skin and the flesh; and some of the largest afford as much as will fill a butt. When the bottle-nosed seals are in motion, they appear almost like immense skins filled with oil; the tremulous motion of the blubber being plainly discernable beneath the surface. They have also so much blood, that, if deeply wounded in a dozen places, it will gush out at every one, and spout to a considerable distance. Lord Anson's sailors, to try the experiment, shot one of them, and obtained from it more than two hogsheds of blood.

They seem to divide their time nearly equally between the land and sea; continuing out during the summer, and coming on shore at the commencement of winter, and residing there all that season. When ashore, they feed on the grass and verdure which grows on the banks of the fresh-water streams; and when not employed in feeding, they sleep in herds, in the most miry places they can find. Each herd seems to be under the direction of a large male; which the seamen ludicrously stile the bashaw, from his driving off the other males from a number of females which he appropriates to himself. These bashaws, however, do not arrive at this envied superiority, without many bloody and dreadful contests, of which their numerous scars generally bear evidence. Their battles are very frequent; and when for the females, always extremely furious. Some of Lord Anson's party observed, one day, on the island of Juan Fernandez, what they at first took for

two animals of a kind different from any they had before seen ; but, on a nearer approach, they proved to be two of these seals, which had been goring each other with their teeth, till both were completely covered with blood.

They are of a lethargic disposition, and when at rest are not easily disturbed. It is not difficult to kill them ; being, in general, from their sluggish and unwieldy motions, incapable either of escaping or resisting. A sailor was, however, one day, carelessly employed in skinning one of the young; when the female from whom he had taken it, came upon him unperceived, and getting his head into her mouth, tore his skull so dreadfully, that he died in a few days afterwards.

It has been observed, that each herd places at a distance some of the males as centinels, who never fail to give the alarm, if any thing hostile approaches. The noise they make for this purpose is very loud, and may be heard at a considerable distance. Their usual voice is a kind of loud grunting ; or sometimes a snorting like horses in full vigour. The females produce two young ones in the winter, which they suckle for some time, and carry on their backs when they swim. These, when first brought forth, are about the size of a full grown common seal.

Lord Anson's people killed many of them, in the island of Juan Fernandez, for food. They called their flesh beef, to distinguish it from that of the common seal, which they denominated lamb. The hearts and tongues were excellent eating ; and, as they thought, preferable even to those of the ox.

## LEONINE SEAL, OR SEA LION.

THE leonine seal has the head and eyes large. The nose turns up, somewhat like that of a pug dog. The ears are conical and erect ; and along the neck of the male runs a mane of stiff curled hair. The whole neck is covered with long waved hair, not unlike that of the lion. The hair of the other parts of the body is short and red ; that of the female yellowish. At a certain age they become grey. The feet resemble those of the ursine seal. The weight of a large male is about sixteen hundred pounds ; and these are frequently from sixteen to eighteen feet long, but the females seldom exceed eight.

Leonine seals are found in great numbers on the eastern coasts of Kamtschatka, as well as on the distant shores of Patagonia. They do not migrate, but only change their place of residence, having winter and summer stations. They live principally among the rocks of the coasts ; and by their dreadful roaring, are frequently of use during foggy weather, in warning sailors of the danger of approaching in their direction.

If a human being appears among them, they immediately run off ; and when disturbed in sleep, they seem seized with horror, sigh deeply in their attempts to escape, fall into the utmost confusion, tumble down, and shake so violently as scarcely to be able to use their limbs. When, however, they are reduced to an extremity, and find it impossible to effect an escape, they become desperate, turn on their assailant with vast noise and fury, and will even put the most courageous man to flight. When they find there is no intention to hurt them, they lose their fear of mankind. Steller, when he was on Bering's island, lived in a



hovel surrounded by them, for six days. They were soon reconciled to him ; and would observe, with great calmness, what he was doing, lie down near him, and even suffer him to seize and play with their cubs.---They often dispute for the possession of females ; and he had an opportunity of seeing several of these conflicts. He once was witness to a duel between two males, which lasted three days, and in which one of them received above a hundred wounds. The ursine seals which were among them never interfered, but always hastened out of the way of their battles.

They bring forth only a single young one at a birth ; and, strange to say, the parents seem to exhibit towards this very little share of affection ; they sometimes tread it to death through carelessness, and will suffer it to be killed before them without concern. The cubs are not sportive, like most other young animals, but seem entirely stupefied by much sleep. The parents take them into the water, and teach them to swim : and when they are tired they climb on the back of their dam ; but the male often pushes them off to habituate them to this exercise.

Each male has from two to four females, which he treats with great kindness ; and he seems very fond of their caresses. In their actions these animals seem much allied to the ursine seals. The old ones bellow like bulls, and the young bleat like sheep. They live on fish, and several of the marine animals. During two of the summer months, the old males abstain almost entirely from eating, and indulge in indolence and sleep, swallowing at intervals large stones to keep the stomach distended. At the end of this time they are excessively emaciated.

The chase of these animals is esteemed by the Kamtschadales an occupation of the highest honour.

When they find one of them asleep, they approach it against the wind ; strike a harpoon, fastened to a long cord, into its breast ; and run off with the utmost precipitation. The other end of the cord being fastened to a stake, prevents the animal from running entirely off ; and they principally effect his destruction by flinging their lances into him, or shooting him with arrows. As soon as he is exhausted, they venture near enough to kill him with their clubs. When one of them is discovered alone on the rocks, they shoot him with poisoned arrows. Immediately he plunges into the sea ; but, unable to bear the poignancy of his wounds in the salt water, swims to shore in the utmost agony. If a good opportunity offers, they transfix him with their lances ; if not, they leave him to die of the poison. Such is the stupidity of these people, that, esteeming it a disgrace to leave any of their game behind, they frequently overload their boats so much, as to send both their booty and themselves to the bottom. But they disdain the thought of saving themselves at the expence of any part of their prize.

The flesh of their young is pleasant food, and their skin is used for the making of straps, shoes, and boots.

#### URIGNE SEAL.

THIS is a smaller species than the former, being found from about three to eight feet in length. The body is thick at the shoulders, and gradually lessens to the hind legs. The head resembles that of a dog with close cut ears ; the nose is short and blunt ; in the mouth are six cutting teeth above, and four below ; the fore feet have four toes inclosed in a membranous sheath, so as to resemble fins ; and the hind feet are hid in a continuation

of the skin of the back ; and have five toes, of unequal length, like the fingers of the human hand ; the tail is three inches long ; the skin is covered with two sorts of hair ; one like that of an ox, the other harder ; the colours are various. These animals are the sea wolves, mentioned by navigators off the island of Lobos, near the river Plata. They are said to appear there in great multitudes, and to meet the ships and even to hang at the ship's side by their paws, seeming to stare at and admire the crew ; then drop off and return to their former haunts. The natives of Chili kill them for the sake of their oil.

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## DOG TRIBE.

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THE generic characters of the dog are these : he has six cutting teeth in the upper jaw ; those at the sides longer than the intermediate ones, which are lobated. In the under jaw there are also six cutting teeth, the lateral being lobated. There are four canine teeth ; one on each side, both above and below ; and six or seven grinders.

Of all this tribe, the dog has every reason to claim the preference, being the most intelligent of all known quadrupeds, and the acknowledged friend of mankind. " The dog," says Buffon, " independent of the beauty of his form, his vivacity, force, and swiftness, is possessed of all those internal qualifications that can conciliate the affections of man, and make the tyrant a protector. A natural share of courage, an angry and ferocious disposition, renders the dog, in its savage state,

a formidable enemy to all other animals ; but these readily give way to very different qualities in the domestic dog, whose only ambition seems the desire to please ; he is seen to come crouching along, to lay his force, his courage, and all his useful talents at the feet of his master ; he waits his orders, to which he pays implicit obedience ; he consults his looks, and a single glance is sufficient to put him in motion ; he is more faithful even than the most boasted among men ; he is constant in his affections, friendly without interest, and grateful for the slightest favours ; much more mindful of benefits received, than injuries offered ; he is not driven off by unkindness ; he still continues humble, submissive, and imploring ; his only hope to be serviceable, his only terror to displease ; he licks the hand that has been just lifted to strike him, and at last disarms resentment, by submissive perseverance.

“ More docile than man, more obedient than any other animal, he is not only instructed in a short time, but he also conforms to the dispositions and the manners of those who command him. He takes his tone from the house he inhabits : like the rest of the domestics, he is disdainful among the great, and churlish among clowns. Always assiduous in serving his master, and only a friend to his friends, he is indifferent to such as rest, and declares himself openly against all that seem to be dependant like himself. He knows a beggar by his clothes, by his voice, or his gestures, and forbids his approach. When at night the guard of the house is committed to his care, he seems proud of the charge : he continues a watchful sentinel, he goes his rounds, scents strangers at a distance, and gives them warning of his being upon duty. If they attempt to break in upon his territories, he becomes more fierce, flies at them,

threatens, fights, and either conquers alone, or alarms those who have most interest in coming to his assistance ; however, when he has conquered, he quietly reposes upon the spoil, and abstains from what he has deterred others from abusing ; giving thus at once a lesson of courage, temperance, and fidelity.

From hence we see of what importance this animal is to us in a state of nature. Supposing, for a moment, that the species had not existed, how could man, without the assistance of the dog, have been able to conquer, tame, and reduce to servitude, every other animal ? How could he discover, chase, and destroy, those that were noxious to him ? In order to be secure, and to become master of all animated nature, it was necessary for him to begin by making a friend of a part of them ; to attach such of them to himself, by kindness and caresses, as seem fittest for obedience and active pursuit. Thus the first art employed by man, was in conciliating the favour of the dog ; and the fruits of this art were, the conquest and peaceable possession of the earth.

The generality of animals have greater agility, greater swiftness, and more formidable arms from nature than man ; their senses, and particularly that of smelling, are far more perfect : the having gained, therefore, a new assistant, particularly one whose scent is so exquisite as that of the dog, was the gaining a new sense, a new faculty, which before was wanting. The machines and instruments which we have imagined for perfecting the rest of the senses, do not approach to that already prepared by nature, by which we are enabled to find out every animal, though unseen, and thus destroy the noxious, and use the serviceable.

The dog, thus useful in himself, taken into a participation of empire, exerts a degree of supe-

riority over all animals that require human protection. The flock and the herd obey his voice more readily even than that of the shepherd or the herdsman ; he conducts them, guards them, keeps them from capriciously seeking danger, and their enemies he considers as his own. Nor is he less useful in the pursuit ; when the sound of the horn, or the voice of the huntsman calls him to the field, he testifies his pleasure by every little art, and pursues with perseverance those animals, which, when taken, he must not expect to divide. The desire of hunting is indeed natural to him, as well as to his master, since war and the chase are the only employment of savages. All animals that live upon flesh hunt by nature ; the lion and the tiger, whose force is so great that they are sure to conquer, hunt alone, and without art ; the wolf, the fox, and the wild-dog, hunt in packs, assist each other, and partake the spoil. But when education has perfected this talent in the domestic dog ; when he has been taught by man to repress his ardour, to measure his motions, and not to exhaust his force by too sudden an exertion of it, he then hunts with method, and always with success.

In those deserted and uncultivated countries where the dog is found wild, they seem entirely to partake of the disposition of the wolf ; they unite in large bodies, and attack the most formidable animals of the forest, the cougar, the panther, and the bison. In America, where they were originally brought by the Europeans, and abandoned by their masters, they have multiplied to such a degree, that they spread in packs over the whole country, attack all other animals, and even man himself does not pass without insult. They are there treated in the same manner as all other carnivorous animals, and killed wherever they happen to come : however, they are easily tamed ;

when taken home, and treated with kindness and lenity, they quickly become submissive and familiar, and continue faithfully attached to their masters. Different in this from the wolf or the fox, who, though taken never so young, are gentle only while cubs, and, as they grow older, give themselves up to their natural appetites of rapine and cruelty. In short, it may be asserted, that the dog is the only animal whose fidelity is unshaken : the only one who knows his master and the friends of the family ; the only one who instantly distinguishes a stranger ; the only one who knows his name, and answers to the domestic call ; the only one who seems to understand the nature of subordination, and seeks assistance ; the only one who, when he misses his master, testifies his loss by his complaints ; the only one who, carried to a distant place, can find the way home ; the only one whose natural talents are evident, and whose education is always successful.

In the same manner, as the dog is of the most complying disposition, so also is it the most susceptible of change in its form : the varieties of this animal being too many for even the most careful describer to mention. The climate, the food, and the education, all make strong impressions upon the animal, and produce alterations in its shape, its colour, its hair, its size, and in every thing but its nature. The same dog taken from one climate, and brought to another, seems to become another animal ; but different breeds are as much separated to all appearance, as any two animals the most distinct in nature. Nothing appears to continue constant with them, but their internal conformation ; different in the figure of the body, in the length of the nose, in the shape of the head, in the length and the direction of the ears and tail, in the colour, the quality, and the quantity

of the hair ; in short, different in every thing but that make of the parts which serve to continue the species, and keep the animal distinct from all others. It is this peculiar conformation, this power of producing an animal that can reproduce, that marks the kind, and approximates forms that at first sight seem never made for conjunction.

From this single consideration, therefore, we may at once pronounce all dogs to be of one kind ; but which of them is the original of all the rest, which of them is the savage dog, from whence such a variety of descendants have come down, is no easy matter to determine. We may easily, indeed, observe, that all those animals which are under the influence of man,<sup>re</sup> are subject to great variations. Such as have been sufficiently independent, so as to choose their own climate, their own nourishment, and to pursue their own habitudes, preserve the original marks of nature, without much deviation ; and it is probable, that the first of these is even at this day very well represented in their descendants. But such as man has subdued, transported from one climate to another, controlled in their manner of living, and their food, have most probably been changed also in their forms ; particularly the dog has felt these alterations more strongly than any other of the domestic kinds ; for living more like man, he may be thus said to live more irregularly also, and, consequently, must have felt all those changes that such variety would naturally produce. Some other causes also may be assigned for this variety in the species of the dog ; as he is perpetually under the eye of his master, when accident has produced any singularity in its productions, man uses all his art to continue this peculiarity unchanged ; either by breeding from such as had



those singularities, or by destroying such as happened to want them ; besides, as the dog produces much more frequently than some other animals, and lives a shorter time, so the chance for its varieties will be offered in greater proportion.

But which is the original animal, and which the artificial or accidental variety, is a question which, as was said, is not easily resolved. If the internal structure of dogs of different sorts be compared with each other, it will be found, except in point of size, that in this respect they are exactly the same. This, therefore, affords no criterion. If other animals be compared with the dog internally, the wolf and the fox will be found to have the most perfect resemblance ; it is probable, therefore, that the dog, which most nearly resembles the wolf or the fox externally, is the original animal of its kind ; for it is natural to suppose, that as the dog most nearly resembles them internally, so he may be near them in external resemblance also, except where art or accident has altered his form. This being supposed, if we look among the number of varieties to be found in the dog, we shall not find one so like the wolf or the fox, as that which is called the shepherd's dog. This is that dog with long coarse hair on all parts except the nose, pricked ears, and a long nose, which is common enough among us, and receives his name from being principally used in guarding and attending on sheep. This seems to be the primitive animal of his kind ; and we shall be the more confirmed in this opinion, if we attend to the different characters which climate produces in the animal, and the different races of dogs which are propagated in every country ; and, in the first place, if we examine those countries which are still savage, or but half civilized, where it is most probable the dog, like

his master, has received but few impressions from art, we shall find the shepherd's dog, or one very like him, still prevailing amongst them. The dogs that have run wild in America, and in Congo, approach this form. The dog of Siberia, Lapland, and Iceland, of the Cape of Good Hope, of Madagascar, Madura, Calicut, and Malabar, have all a long nose, pricked ears, and resemble the shepherd's dog very nearly. In Guinea, the dog very speedily takes this form; for, at the second or third generation, the animal forgets to bark, his ears and his tail become pointed, and his hair drops off, while a coarser, thinner kind, comes in its place. This sort of dog is also to be found in the temperate climates in great abundance, particularly among those who, preferring usefulness to beauty, employ an animal that requires very little instruction to be serviceable. Notwithstanding this creature's deformity, his melancholy and savage air, he is superior to all the rest of his kind in instinct; and without any teaching, naturally takes to tending flocks, with an assiduity and vigilance that at once astonishes, and yet relieves his master.

In more polished and civilized places, the dog seems to partake of the universal refinement; and, like the men, becomes more beautiful, more majestic, and more capable of assuming an education foreign to his nature. The dogs of Albany, of Greece, of Denmark, and of Ireland, are larger and stronger than those of any other kind. In France, Germany, Spain, and Italy, the dogs are of various kinds, like the men; and this variety seems formed by crossing the breed of such as are imported from various climes.

The shepherd's dog may, therefore, be considered as the primitive stock from whence these varieties are all derived. He makes the stem of that ge-

nealogical tree, which has been branched out into every part of the world. This animal still continues pretty nearly in its original state among the poor in temperate climates; being transported into the colder regions, he grows less and more ugly among the Laplanders; but becomes more perfect in Iceland, Russia, and Siberia, where the climate is less rigorous, and the people more civilized. Whatever differences there may be among the dogs of these countries, they are not very considerable, as they have all straight ears, long and thick hair, a savage aspect, and do not bark either so often or so loud as dogs of the more cultivated kind.

The shepherd's dog, transported into the temperate climates, and among people entirely civilized, such as England, France and Germany, will be divested of his savage air, his pricked ears, his rough, long, and thick hair, and from the single influence of climate and food alone, will become either a *matin*, a *mastiff*, or a *hound*. These three seem the immediate descendants of the former; and from them the other varieties are produced.

The *hound*, the *harrier*, and the *beagle*, seem all of the same kind; for although the *bitch* is covered but by one of them, yet in her litters are found puppies resembling all the three. This animal, transported into Spain or Barbary, where the hair of all quadrupeds becomes soft and long, will be there converted into the *land-spaniel*, and the *water-spaniel*, and these of different sizes.

The *grey matin hound*, which is in the second branch, transported to the North, becomes the great *Danish dog*; and this, sent into the South, becomes the *grey-hound*, of different sizes. The same, transported into Ireland, the Ukraine, Tarry, Epirus, and Albania, becomes the great

wolf-dog, known by the name of the Irish wolf-dog.

Mastiff, which is the third branch, and chiefly a native of England, when transported into Denmark, becomes the little Danish dog; and this little Danish dog, sent into the tropical and warm climates, becomes the animal called the Turkish dog, without hair. All these races, with their varieties, are produced by the influence of climate, joined to the different food, education, and shelter, which they have received among mankind. All other kinds may be considered as mongrel races, produced by the concurrence of these, and found rather by crossing the breed, than by attending to the individual. As these are extremely numerous, and very different in different countries, it would be almost endless to mention the whole; besides, nothing but experience can ascertain the reality of these conjectures, although they have so much the appearance of probability; and until that gives more certain information, we must be excused from entering more minutely into the subject.

“With regard to the dogs of our country in particular,” says Goldsmith, “the varieties are very great, and the number every day increasing. And this must happen in a country so open by commerce to all others; and where wealth is apt to produce capricious predilection. Here the ugliest and the most useless of their kinds will be entertained merely for their singularity; and, being imported only to be looked at, they will lose even that small degree of sagacity which they possessed in their natural climates. From this importation of foreign useless dogs, our own native breed is, I am informed, greatly degenerated; and the varieties now to be found in England much more numerous than they were in the





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times of queen Elizabeth, when Doctor Caius attempted their natural history. Some of these he mentions are no longer to be found among us, although many have since been introduced, by no means so serviceable as those which have been suffered to decay.

“ He divides the whole race into three kinds: The first is the generous kind which consists of the terrier, the harrier, and the blood-hound; the gaze-hound, the grey-hound, the lemmer, and the tumbler; all these are used for hunting. Then the spaniel, the setter, and the water-spaniel, or finder, were used for fowling; and the spaniel gentle, or lap-dog, for amusement. The second is the farm-kind, consisting of the shepherd’s dog and the mastiff. And the third is the mongrel kind, consisting of the wappe, the turnspit, and the dancer. To these varieties we may add at present the bull-dog, the Dutch mastiff, the harlequin, the pointer, and the Dane, with a variety of lap-dogs, which, as they are perfectly useless, may be considered as unworthy of a name.

“ The terrier is a small kind of hound, with rough hair, made use of to force the fox or the badger out of their holes; or rather to give notice, by their barking, in what part of their kennel the fox or badger resides, when the sportsmen intend to dig them out.

“ The harrier, as well as the beagle and the fox-hound, are used for hunting; of all other animals, they have the quickest and most distinguishing sense of smelling. The properly breeding, matching, and training these, make up the business of many men’s lives.

“ The blood-hound was a dog of great use, and high esteem among our ancestors. Its employ was to recover any game that had escaped from the hunter, or had been killed and stolen out of

the forest. But it was still more employed in hunting thieves and robbers by their footsteps. At that time when the country was less peopled than at present and when, consequently, the footsteps of one man were less crossed and obliterated by those of others, this animal was very serviceable in such pursuits ; but at present, when the country is every where peopled, this variety is quite worn out ; probably because it was found of less service than formerly.

“ The gaze-hound hunted, like our grey-hounds, by the eye and not by the scent. It chased indifferently the fox, hare, or buck. It would select from the herd the fattest and fairest deer, pursue it by the eye, and if lost recover it again with amazing sagacity. This species is now lost or unknown among us.

“ The grey-hound is very well known at present, and was formerly held in such estimation, that it was the peculiar companion of a gentleman, who, in the times of semi-barbarism, was known by his horse, his hawk, and his grey-hound. Persons under a certain rank of life are forbidden, by some late game-laws, from keeping this animal ; wherefore, to disguise it the better, they cut off its tail.

“ The leymmer is a species now unknown to us. It hunted both by scent and sight, and was led in a leyme or thong, from whence it received its name.

“ The tumbler was less than the hound, more scraggy, and had pricked ears ; so that, by the description, it seems to answer to the modern lurcher. This took its prey by mere cunning, depending neither on the goodness of its nose nor its swiftness. If it came into a warren, it neither barked nor ran on the rabbits, but, seemingly inattentive, approached sufficiently near, till it



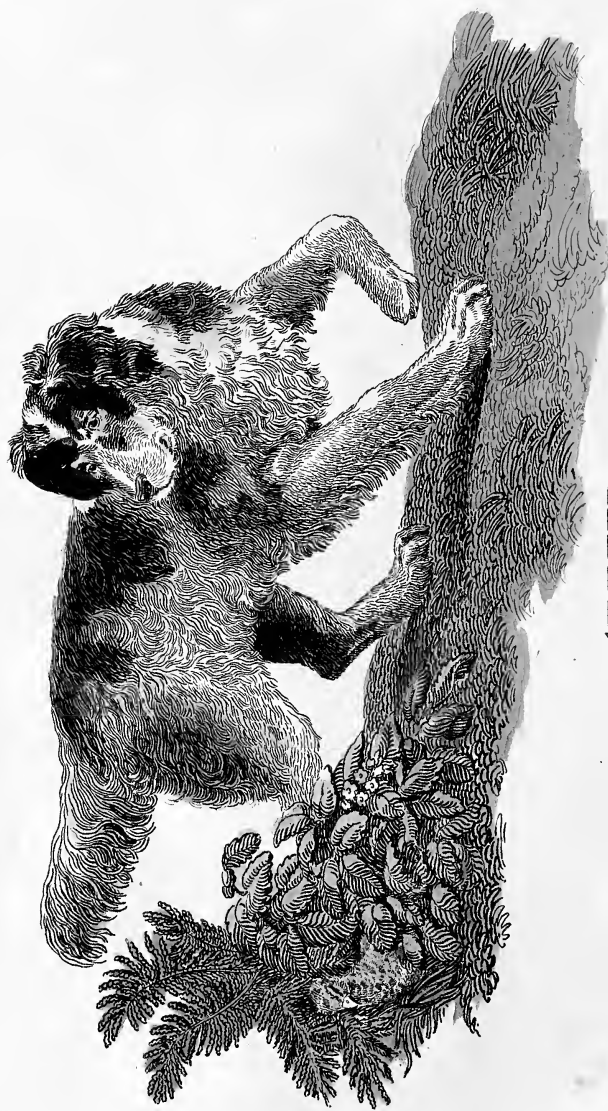


GREYHOUND.

TERRIER.







SIE T T R R .





SPANIEL.

came within reach, and then seized them by a sudden spring.

“The land spaniel, which probably had its name from Spain, where it might have acquired the softness of its hair, is well known at present. There are two varieties of this kind ; namely, the slater, used in hawking, to spring the game ; and the setter, that crouches down when it scents the birds, till the net be drawn over them. I have read somewhere that the famous poet, Lord Surry, was the first who taught dogs to set ; it being an amusement, to this day, only known in England.

“The water spaniel was another species used in fowling. This seems to be the most docile of all the dog kind ; and this docility is particularly owing to his natural attachment to man. Many other kinds will not bear correction ; but this patient creature, though very fierce to strangers, seems unalterable in his affections ; and blows and ill usage seem only to increase his regard.

“The lap-dog, at the time of Doctor Caius, was of Maltese breed ; at present it comes from different countries ; in general, the more awkward or extraordinary these are, the more they are prized.

“The shepherd’s dog has been already mentioned, and as for the mastiff, he is too common to require a description. Doctor Caius tells us, that three of these were reckoned a match for a bear, and four for a lion. However, we are told that three of them overcame a lion in the time of king James the first ; two of them being disabled in the combat, the third obliged the lion to seek for safety by flight.

“As to the last division, namely, of the wappe, the turnspit, and the dancer, these were mongrels, of no certain shape, and made use of

only to alarm the family, or, being taught a variety of tricks, were carried about as a show.

“ With regard to those of later importation, the bull-dog, as M. Buffon supposes, is a breed between the small Dane and the English mastiff. The large Dane is the tallest dog that is generally bred in England. It is somewhat between a mastiff and a grey-hound in shape, being more slender than the one, and much stronger than the other. They are chiefly used rather for show than service, being neither good in the yard nor the field. The highest are most esteemed; and they generally cut off their ears to improve their figure, as some absurdly suppose. The harlequin is not much unlike the small Dane, being an useless animal, somewhat between an Italian grey-hound and a Dutch mastiff. To these several others might be added, such as the pug-dog, the black breed, and the pointer; but, in fact, the varieties are so numerous as to fatigue even the most ardent curiosity.”

Of those of the foreign kinds, I shall mention only three, which are more remarkable than any of the rest. The lion dog greatly resembles that animal, in miniature, from whence it takes the name. The hair of the fore part of its body is extremely long, while that of the hinder part is as short. The nose is short, the tail long, and tufted at the point, so that in all these particulars it is entirely like the lion. However, it differs very much from that fierce animal in nature and disposition, being one of the smallest animals of its kind, extremely feeble, timid, and inactive. It comes originally from Malta, where it is found so small, that women carry it about in their sleeves.

That animal, falsely called the Turkish-dog,







IRISH WOLF DOG

differs greatly from the rest of the kind, in being entirely without hair. The skin, which is perfectly bare, is of a flesh-colour, with brown spots; and their figure, at first view, is rather disgusting. These seem to be of the small Danish breed, brought into a warm climate, and there, by a succession of generations, divested of their hair. For this reason, they are extremely chilly, and unable to endure the cold of our climate; and, even in the midst of summer, they continue to shiver as we see men in a frosty day. Their spots are brown; as was said, well marked, and easily distinguishable in summer; but in the cold of winter they entirely disappear. They are called the Turkish breed, although brought from a much warmer climate; for some of them have been known to come from the warmest parts of Africa and the East-Indies.

“ The last variety, and the most wonderful of all that I shall mention, is the great Irish wolf-dog, that may be considered as the first of the canine species. This animal, which is very rare, even in the only country in the world where it is to be found, is rather kept for show than use; there being neither wolves nor any other formidable beasts of prey in Ireland, that seem to require so powerful an antagonist. The wolf-dog is therefore bred up in the houses of the great, or such gentlemen as choose to keep him as a curiosity, being neither good for hunting the hare, the fox, nor the stag, and equally unserviceable as a house dog. Nevertheless he is extremely beautiful and majestic to appearance, being the greatest of the dog kind to be seen in the world. The largest of those I have seen, and I have seen above a dozen, was about four feet high, or as tall as a calf of a year old. He was made extremely like a greyhound, but rather more robust, and inclining to

the figure of the French *matin*, or the great Dane. His eye was mild, his colour white, and his nature seemed heavy and phlegmatic. This I ascribed to his having been bred up to a size beyond his nature ; for we see in man, and all other animals, that such as are overgrown are neither so vigorous nor alert as those of a more moderate stature. The greatest pains have been taken with these to enlarge the breed, both by food and matching. This end was effectually obtained, indeed, for the size was enormous ; but, as it seemed to me, at the expense of the animal's fierceness, vigilance, and sagacity. However, I was informed otherwise ; the gentleman who bred them assuring me that a mastiff would be nothing when opposed to one of them, who generally seized their antagonist by the back ; he added, that they would worry the strongest bull-dogs, in a few minutes, to death. But this strength did not appear either in their figure or their inclinations ; they seemed rather more timid than the ordinary race of dogs ; and their skin was much thinner, and consequently less fitted for combat. Whether, with these disadvantages they were capable, as I was told, of singly coping with bears, others may determine ; however, they have but few opportunities, in their own country, of exerting their strength, as all wild carnivorous animals there are only of the vermin kind. M. Buffon seems to be of opinion that these are the true Molossian dogs of the ancients ; he gives no reason for this opinion ; and I am apt to think it ill-grounded. Not to trouble the reader with a tedious critical disquisition, which I have all along avoided, it will be sufficient to observe, that Nemesianus, in giving directions for the choice of a bitch, advises to have one of Spartan or Molossian breed ; and, among several other perfections, he says, that the ears

should be dependent, and fluctuate as she runs. This, however, is by no means the case with the Irish wolf-dog, whose ears resemble those of the grey-hound, and are far from fluctuating with the animal's motions. But of whatever kinds these dogs may be, whether known among the ancients, or whether produced by a later mixture, they are now almost quite worn away, and are very rarely to be met with, even in Ireland. If carried to other countries, they soon degenerate; and even at home, unless great care be taken, they quickly alter. They were once employed in clearing the island of wolves, which infested it in great plenty; but these being destroyed, the dogs also are wearing away, as if nature meant to blot out the species, when they had no longer any services to perform.

“ In this manner several kinds of animals fade from the face of nature, that were once well known, but are now seen no longer. The enormous elk of the same kingdom, that, by its horns, could not have been less than eleven feet high, the wolf, and even the wolf-dog, are extinct, or only continued in such a manner, as to prove their former plenty and existence. From hence, it is probable, that many of the nobler kinds of dogs, of which the ancients have given us such beautiful descriptions, are now utterly unknown; since among the whole breed, we have not one that will venture to engage the lion or the tyger in single combat. The English bull-dog is perhaps the bravest of the kind; but what are his most boasted exploits to those mentioned of the Epirotic dogs by Pliny, or the Indian dogs by Ælian. The latter gives us a description of a combat between a dog and a lion, which I will take leave to translate.

“ When Alexander was pursuing his conquests

in India, one of the principal men of that country was desirous of showing him the value of the dogs which his country produced. Bringing his dog into the king's presence, he ordered a stag to be let loose before him, which the dog despised as an unworthy enemy, remained quite regardless of the animal, and never once stirred from his place. His master then ordered a wild boar to be set out ; but the dog thought even this a despicable foe, and remained calm and regardless as before. He was next tried with a bear ; but still despising his enemy, he only waited for an object more worthy of his courage and his force. At last they brought forth a tremendous lion, and then the dog acknowledged his antagonist, and prepared for combat. He instantly discovered a degree of ungovernable ardour ; and, flying at the lion with fury, seized him by the throat, and totally disabled him from resistance. Upon this, the Indian, who was desirous of surprising the king, and knowing the constancy and bravery of his dog, ordered his tail to be cut off ; which was easily performed as the bold animal was employed in holding the lion. He next ordered one of his legs to be broken ; which, however, did not in the least abate the dog's ardour, but he still kept his hold as before. Another leg was then broken ; but the dog, as if he had suffered no pain, only pressed the lion still the more. In this cruel manner, all his legs were cut off, without abating his courage ; and at last, when even his head was separated from his body, the jaws seemed to keep their former hold. A sight so cruel did not fail to affect the king with very strong emotions, at once pitying the dog's fate, and admiring his fortitude. Upon which the Indian, seeing him thus moved, presented him with four dogs of the same kind, which, in some

measure, alleviated his uneasiness for the loss of the former.

“ The breed of dogs however, in that country, is at present very much inferior to what this story seems to imply ; since in many places, instead of dogs, they have animals of the cat kind for hunting. In other places, also, this admirable and faithful animal, instead of being applied to his natural uses, is only kept to be eaten. All over China, there are dog-butchers, and shambles appointed for selling their flesh. In Canton, particularly, there is a street appointed for that purpose ; and, what is very extraordinary, wherever a dog butcher appears, all the dogs of the place are sure to be in full cry after him ; they know their enemy, and persecute him as far as they are able.”

Along the coasts of Guinea, their flesh is esteemed a delicacy by the negroes, and they will give one of their cows for a dog. But, among this barbarous and brutal people, scarce any thing that has life comes amiss ; and they may well take up with a dog, since they consider toads, lizards, and even the flesh of the tiger itself, as a dainty. It may, perhaps, happen that the flesh of this animal, which is so indifferent in the temperate climates, may assume a better quality in those which are more warm ; but it is more than probable that the diversity is rather in man than in the flesh of the dog ; since in the cold countries the flesh is eaten with equal appetite by the savages ; and they have their dog-feasts in the same manner as we have ours for venison.

The care of the dog in directing the steps of the blind, is highly deserving of notice. Mr. Ray, in his *Synopsis of Quadrupeds*, informs us of a blind beggar who was thus led through the

streets of Rome by a middle sized dog. This dog, besides leading his master in such a manner as to protect him from all danger, learned to distinguish both the streets and houses where he was accustomed to receive alms twice or thrice a week. Whenever the animal came to any one of these streets, with which he was well acquainted, he would not leave it till a call had been made at every house where his master was usually successful in his petitions. When the beggar began to ask alms, the dog lay down to rest ; but the man was no sooner served or refused, than the dog rose spontaneously, and without either order or sign, proceeded to the other houses, where the beggar generally received some gratuity. " I observed," says he, " not without pleasure and surprise, that when a halfpenny was thrown from a window, such was the sagacity and attention of this dog, that he went about in quest of it, took it from the ground with his mouth, and put it into the blind man's hat. Even when bread was thrown down, the animal would not taste it, unless he received it from the hand of his master."

Dogs can be taught to go to market with money, to repair to a known shop, and carry home provisions in safety. Some years since, the person who lives at the turnpike house about a mile from Stratford on Avon, had trained a dog to go to the town for any small articles of grocery, &c. that he wanted. A note, mentioning the things, was tied round the dog's neck, and in the same manner the articles were fastened ; and in these errands the commodities were always brought safe to his master.

A grocer in Edinburgh had a dog, which, for some time, amused and astonished the people in the neighbourhood. A man who went through the streets ringing a bell and selling penny pies, hap-



pened one day to treat this dog with a pie. The next time he heard the pieman's bell, he ran to him with impetuosity, seized him by the coat, and would not suffer him to pass. The pieman, who understood what the animal wanted, shewed him a penny, and pointed to his master, who stood at the street-door and saw what was going on. The dog immediately supplicated his master by many humble gestures and looks. The master put a penny into the dog's mouth, which he instantly delivered to the pieman, and received his pie. This traffic between the pieman and the grocer's dog continued to be daily practised for many months.

At a convent in France, twenty paupers were served with a dinner at a certain hour every day. A dog, belonging to the convent, did not fail to be present at this regale, to receive the odds and ends which were now and then thrown down to him. The guests, however, were poor and hungry, and of course not very wasteful, so that their pensioner did little more than scent the feast, of which he would fain have partaken. The portions were served by a person, at the ringing of a bell, and delivered out by means of what, in religious houses, is called a *tour* ; which is a machine like the section of a cask, and, by turning round upon a pivot, exhibits whatever is placed on the concave side, without discovering the person who moves it. One day this dog, who had only received a few scraps, waited till the paupers were all gone, took the rope in his mouth, and rang the bell. His stratagem succeeded. He repeated it the next day with the same good fortune. At length the cook, finding that twenty-one portions were given out instead of twenty, was determined to discover the trick, in doing which he had no great difficulty ; for lying *perdu*, and noticing the paupers as they came, in great regularity, for their different por-

tions, and that there was no intruder except the dog, he began to suspect the real truth which he was confirmed in when he saw him wait with great deliberation till the visitors were all gone, and then pull the bell. The matter was related to the community ; and to reward him for his ingenuity, he was permitted to ring the bell every day for his dinner, when a mess of broken victuals was purposely served out to him.

In the year 1760, the following incident illustrative of the sagacity of the dog, occurred near Hammersmith : while a man of the name of Richardson, a waterman of that place, was sleeping in his boat, the vessel broke her mooring, and was carried by the tide under a West-country barge. Fortunately for the man his dog happened to be with him ; and the sagacious animal awakened him by pawing his face, and pulling the collar of his coat, at the instant the boat was filling with water ; he seized the opportunity, and thus saved himself from otherwise inevitable death.

In the year 1781, a person went to a house in Deptford to take lodgings, under pretence that he had just arrived from the West Indies ; and after having agreed on the terms, said he should send his trunk that night, and come himself the next day. About nine o'clock in the evening, the trunk was brought by two porters, and was carried into his bed-room. Just as the family were going to bed, their little house-dog, deserting his usual station in the shop, placed himself close to the chamber-door where the chest was deposited, and kept up an incessant barking. The moment the chamber-door was opened the dog flew to the chest, against which it scratched and barked with redoubled fury. They attempted to get the dog out of the room, but in vain. Calling in some neigh-

bours, and making them eye-witnesses of the circumstance, they began to move the trunk about ; when they quickly discovered that it contained something that was alive. Suspicion becoming very strong, they were induced to force it open ; when, to their utter astonishment, they found in it their new lodger, who had been thus conveyed into the house with the intention of robbing it.

A dog that had been the favorite of an elderly lady, discovered some time after her death the strongest emotions on the sight of her picture, when it was taken down to be cleaned. Before this instant he had never been observed to notice the painting. Here was evidently a case either of passive remembrance, or of the involuntary renewal of former impressions. Another dog, the property of a gentleman that died, was given to a friend in Yorkshire. Several years afterwards, a brother from the West Indies paid a short visit at the house where the dog then was. He was instantly recognized, though an entire stranger, in consequence, most probably, of a strong personal likeness. The dog fawned upon and followed him with great affection to every place where he went.

Mr. C. Hughes, an actor, had a wig, which generally hung on a peg in one of his rooms. He one day lent the wig to a brother player, and some time after called on him. Mr. Hughes had his dog with him, and the man happened to have the borrowed wig on his head. Mr. Hughes stayed a little while with his friend ; but, when he left him, the dog remained behind : for some time he stood, looking full in the man's face ; then making a sudden spring, leaped on his shoulders, seized the wig, and ran off with it as fast as he could ; and, when he reached home, he endeavoured by jumping, to hang it up in its usual place. The

same dog was one afternoon passing through a field in the skirts of Dartmouth, where a washer-woman had hung out her linen to dry. He stopped and surveyed one particular shirt with attention; then seizing it, he dragged it away through the dirt to his master, whose shirt it proved to be.

In December, 1784, a dog was left by a smuggling vessel near Boomer, on the coast of Northumberland. Finding himself deserted, he began to worry the sheep; and did so much damage, that he became the terror of the country, for a circuit of above twenty miles. We are assured, that when he caught a sheep, he bit a hole in its right side, and after eating the fat about the kidneys, left it. Several, thus lacerated, were found alive by the shepherds; and being properly attended to, some of them recovered, and afterwards had lambs. From his delicacy in this respect, the destruction he made may in some measure be conceived; as it may be supposed, the fat of one sheep a-day would hardly satisfy his hunger. The farmers were so much alarmed by his depredations, that various means were taken for his destruction. They pursued him with hounds, greyhounds, &c. but, when the dogs came up to him, he lay down on his back, as if supplicating for mercy, and in that position they did not attempt to hurt him. He therefore used to lie quietly till the men approached; when he made off, without being followed by the hounds, till they were again excited to the pursuit, which always terminated unsuccessfully. He was one day pursued from Howick to the distance of upwards of thirty miles; but returned thither and killed sheep the same evening. His constant residence during the day, was upon a rock on the Heugh-hill, near Howick, where he had a view of four roads that approached

it ; and in March, 1785, after many fruitless attempts, he was at last shot there.

In one part of his journey through North America, Mr. Bartram observed, on an extensive lawn, a troop of horses that were feeding, and under the controul only of a single black dog, similar, in every respect, to the wolf of Florida, except that he was able to bark like a common dog. He was very careful and industrious in keeping together his charge ; and if any one strolled from the rest to too great a distance, the dog would spring up, head the horse, and bring him back to the company. The proprietor of these horses was an Indian, who lived about ten miles from this place ; who, from a whim, and for the sake of experiment, had trained his dog to this business from a puppy. He followed his master's horses only, keeping them in a separate company where they ranged ; and when he found himself hungry, or wanted to see his master, in the evening he returned to the town where he lived, but never stayed from home at night.

In South America, multitudes of dogs breed in holes like rabbits. When these are found young, they instantly attach themselves to mankind, and never desert their masters to rejoin the society of wild dogs, their former companions. These dogs have the appearance of the greyhound, carry their ears erect, are very vigilant, and excellent in the chace.

Some nations admire the dog as food. In some of the South Sea islands dogs are fattened with vegetables, which the natives savagely cram down their throats when they will voluntarily eat no more. They become exceedingly fat ; and are allowed by Europeans who have overcome their prejudices, to be very palatable. They are killed by strangling ; and the extravasated blood is pre-

served in cocoa-nut shells, and baked for the table. The negroes of the coast of Guinea are so partial to these animals as food, that they frequently give considerable prices for them : a large sheep for a dog was formerly, and probably is now, a common article of exchange. Even the ancients esteemed a young and a fat dog to be excellent eating. Hippocrates ranks it with mutton or pork. The Romans admired sucking whelps, esteeming them a supper in which even the gods delighted.

The Siberian dog, which is not uncommon in any of the climates about the arctic circle, is used in Kamtschatka for drawing sledges over the frozen snow. These sledges generally carry only a single person, who sits sideways. The number of dogs usually employed, is five ; four of them are yoked two and two, and the other acts as leader. The reins are fastened, not to the head, but to the collar ; and the driver has, therefore, to depend principally on their obedience to his voice. Great care and attention are consequently necessary in training the leader ; which, if he is steady and docile, becomes very valuable ; the sum of forty roubles (or ten pounds) being no uncommon price for one of them.

The cry of *tagtag, tagtag*, turns him to the right ; and *hougha, hougha*, to the left. The intelligent animal immediately understands the words, and gives to the rest the example of obedience. *Ah, ah*, stops the dogs ; and *ha*, makes them set off.

The charioteer carries in his hand a crooked stick, which answers the purpose both of whip and reins. Iron-rings are suspended at one end of this stick, by way of ornament, and to encourage the dogs by their noise, for they are frequently jingled for that purpose. If the dogs are well trained, it is not necessary for the rider to exercise his

voice ; if he strikes the ice with his stick, they will go to the left ; if he strikes the legs of the sledge they will go to the right ; and when he wishes them to stop, he has only to place the stick between the snow and the front of the sledge. When they are inattentive to their duty, the charioteer often chastizes them by throwing this stick at them. The dexterity of the riders in picking it up again, is very remarkable, and is the most difficult manœuvre in this exercise ; nor is it, indeed, surprising that they should be skilful in a practice, in which they are so materially interested ; for the moment the dogs find that the driver has lost his stick, unless the leader is both steady and resolute, they set off at full speed, and never stop till either their strength is exhausted, or till the carriage is overturned and dashed to pieces, or hurried down a precipice, when all are buried in the snow.

The manner in which they are generally treated, seems but ill calculated for securing their attachment. During the winter they are fed sparingly with putrid fish ; and in summer are turned loose, to shift for themselves, till the return of the severe season renders it necessary to the master's interest that they should be taken again into custody, and brought once more to their state of toil and slavery. When yoking to the sledge they utter the most dismal howlings ; but, when every thing is prepared, a kind of cheerful yelping succeeds, which ceases the instant they begin their journey.

These animals have been known to perform, in three days and a half, a journey of almost two hundred and seventy miles. And scarcely are horses more useful to Europeans, than these dogs are to the inhabitants of the frozen and cheerless regions of the North. When, during the most severe storm, their master cannot see the path, nor

even keep his eyes open, they very seldom miss their way ; whenever they do this, they go from one side to the other, till, by their smell, they regain it ; and when in the midst of a long journey, as it often happens, it is found absolutely impossible to travel any farther, the dogs, lying round their master, will keep him warm, and defend him from all danger. They also foretel an approaching storm, by stopping and scraping the snow with their feet ; in which case it is always adviseable, without delay, to look out for some village, or other place of safety.

Dingo, or New South Wales dog, is an animal of uncommon strength and fierceness. The ears are short and erect ; the tail is bushy ; the hair, which is of a reddish dun, is long, thick, and straight. He is capable of barking, but not so readily as European dogs. Such as have been brought over are savage and untractable.

The Newfoundland dogs were originally brought from the country of which they bear the name ; where their great strength and docility render them extremely useful to the settlers, who employ them in bringing down wood, on sledges, from the interior parts of the country to the sea-coast. They have great strength, and are able to draw very considerable weights. Four of them yoked to a sledge will trail three hundred weight of wood with apparent ease, for several miles. Their docility is as material to their owners as their strength ; for they frequently perform these services without a driver. As soon as they are relieved of their load at the proper place, they return in the same order to the woods from whence they were dispatched ; where their labours are commonly rewarded with a meal of dried fish.

They are web-footed ; and can swim extremely fast, and with great ease. Their extraordinary



sagacity and attachment to their masters, render them, in particular situations, highly valuable.

In the summer of 1792, a gentleman went to Portsmouth for the benefit of sea-bathing. He was conducted in one of the machines into the water ; but being unacquainted with the steepness of the shore, and no swimmer, he found himself, the instant he quitted the machine, nearly out of his depth. The state of alarm into which he was thrown, increased his danger ; and, unnoticed by the person who attended the machine, he would unavoidably have been drowned, had not a large Newfoundland dog, which by accident was standing on the shore and observed his distress, plunged in to his assistance. The dog seized him by the hair, and conducted him safely to the shore ; but it was sometime before he recovered. The gentleman afterwards purchased the dog at a high price, and preserved him as a treasure of equal value with his whole fortune.

During a severe storm in the winter of 1789, a ship belonging to Newcastle was lost near Yarmouth ; and a Newfoundland dog alone escaped to shore, bringing in his mouth the captain's pocket-book. He landed amidst a number of people, several of whom in vain attempted to take from him his prize. The sagacious animal, as if sensible of the importance of the charge, which, in all probability was delivered to him by his perishing master, at length leapt fawningly against the breast of a man, who had attracted his notice among the crowd, and delivered the book to him. The dog immediately returned to the place where he had landed ; and watched with great attention for all the things that came from the wrecked vessel, seizing them, and endeavouring to bring them to land.

A gentleman, walking by the side of the river

Tyne, observed, on the opposite side, that a child had fallen into the water : he pointed out the object to his dog, which immediately jumped in, swam over, and, catching hold of the child with his mouth, landed it safely on the shore.

The following anecdote, among the immense numbers that have been recorded, affords a proof of the wonderful spirit of the hound, in supporting a continuance of exertion :

“ Many years since, a very large stag was turned out of Whinfield park, in the county of Westmoreland ; and was pursued by the hounds, till, by fatigue or accident, the whole pack was thrown out, except two staunch and favourite dogs, which continued the chase the greatest part of the day. The stag returned to the park from whence he set out ; and, as his last effort, leapt the wall, and immediately expired. One of the hounds pursued him to the wall ; but being unable to get over, lay down, and almost immediately expired : the other was also found dead at a little distance. The length of the chase is uncertain ; but, as they were seen at Red-kirks, near Annan, in Scotland, distant, by the post road, about forty-six miles, it is conjectured that the circuitous and uneven course they might be supposed to take, would not be less than one hundred and twenty miles.

“ To commemorate this fact, the horns of the stag, which were the largest ever seen in that part of the country, were placed on a tree of enormous size in the park, afterwards called hart-horn tree.

The horns have been since removed ; and are now at Julian's bower, in the same county.

A person of quality, (says Mr. Boyle,) to make trial whether a young blood-hound was well instructed, caused one of his servants to walk to a town four miles off, and then to a market-town three miles from thence. The dog, without seeing

the man he was to pursue, followed him by the scent, to the above-mentioned places, notwithstanding the multitude of market-people that went along the same road, and of travellers that had occasion to cross it; and when the blood-hound came to the chief market-town, he passed through the streets, without taking notice of any of the people there; and ceased not till he had gone to the house where the man he sought rested himself, and where he found him in an upper room, to the wonder of those who had accompanied him in this pursuit.

A most extraordinary instance of memory in a mastiff is related by M. D'Obsonville. This dog, which he had brought up in India from two months old, accompanied himself and a friend from Pondicherry to Benglour, a distance of more than three hundred leagues. "Our journey (he continues) occupied nearly three weeks; and we had to traverse plains and mountains, and to ford rivers, and go along several bye-paths. The animal, which had certainly never been in that country before, lost us at Benglour, and immediately returned to Pondicherry. He went directly to the house of M. Beylier, then commandant of artillery, my friend, and with whom I had generally lived. Now the difficulty is, not so much to know how the dog subsisted on the road, for he was very strong and able to procure himself food; but how he should so well have found his way, after an interval of more than a month! This was an effort of memory greatly superior to that which the human race is capable of exerting.

Stow relates an instance of a contest between three mastiffs and a lion, in the presence of king James the first. One of the dogs, being put into the den, was soon disabled by the lion; which took him by the head and neck, and dragged him

about. Another dog was then let loose ; and was served in the same manner. But the third, being put in, immediately seized the lion by the lip, and held him for a considerable time ; till, being severely torn by his claws, the dog was obliged to quit his hold. The lion, greatly exhausted by the conflict, refused to renew the engagement ; but, taking a sudden leap over the dogs, fled into the interior part of his den. Two of the dogs soon died of their wounds ; the last survived, and was taken great care of by the king's son ; who said, " He that had fought with the king of beasts, should never after fight with any inferior creature.

This animal, conscious of his superior strength, has been known to chastise, with great dignity, the impertinence of an inferior. A large dog of this kind, belonging to the late M. Ridley, esq. of Heaton, near Newcastle, being frequently molested by a mongrel, and teased by its continual barking, at last took it up in his mouth by the back, and with great composure dropped it over the quay into the river, without doing any farther injury to an enemy so contemptible.

Some years ago, at a bull-baiting in the North of England, when that barbarous custom was more prevalent than it is at present, a young man, confident of the courage of his dog, laid some trifling wagers that he would, at separate times, even cut off all the animal's feet ; and that, after every successive amputation, he would attack the bull. The cruel and unmanly experiment was tried ; and the dog continued to seize the bull with the same eagerness as before.

An anecdote related by Mr. Hope, and well authenticated by other persons, shews also that this animal is both capable of resentment when injured, and of great contrivance to accomplish it. A gentleman of Whitmore in Staffordshire, used to come

twice a-year to town ; and being fond of exercise, generally performed the journey on horseback, accompanied most part of the way by a faithful little terrier dog, which, lest he might lose it in town, he always left to the care of Mrs. Langford, his landlady, at St. Alban's ; and on his return he was sure to find his little companion well taken care of. The gentleman calling one time, as usual, for his dog, Mrs. Langford appeared before him with a woeful countenance :—' Alas ! sir, your terrier is lost ! Our great house-dog and he had a quarrel : and the poor terrier was so worried and bit before we could part them, that I thought he could never have got the better of it. He however crawled out of the yard, and no one saw him for almost a week. He then returned, and brought with him another dog, bigger by far than ours ; and they both together fell on our great dog, and bit him so unmercifully, that he has scarcely since been able to go about the yard, or to eat his meat. Your dog and his companion then disappeared, and have never since been seen at St. Alban's.' The gentleman heard the story with patience, and endeavoured to reconcile himself to the loss. On his arrival at Whitmore, he found his little terrier ; and on inquiring into circumstances, was informed that he had been at Whitmore, and had coaxed away the great dog ; who it seems had, in consequence, followed him to St. Alban's, and completely avenged his injury.

In Japan the dogs are amazingly numerous ; they lie about the streets, and are very troublesome to passengers. In Kaempfer's time, the emperor was so fond of these animals, as to cause huts to be built, and food to be provided for them, in every street ; the utmost care was taken of them during sickness, and when they died, they were carried to the usual burying places on the tops of

mountains. This attention to the species arose merely from the superstitious whim of one of the late emperors, who happened to be born under the sign of the dog, one of the Japanese constellations. A poor fellow, that had lost his dog by death, sweating under his load in climbing the mountain of interment, was overheard by his neighbour, cursing, at a dreadful rate, the edict. "Friend, (said his neighbour,) you have reason to thank the gods that the emperor was not born under the horse; for that would have then been your load!" If these animals happen to do any injury, none but the public executioner dare presume to punish them; and it is even necessary for him to receive a direct order for the purpose, from some of the governors.

It is singular that the race of European dogs shew as great an antipathy to the American species, as they do to the wolf. They never meet with them without exhibiting every possible sign of dislike; they will fall on and worry them; while the wolfish breed, with every mark of timidity, puts its tail between its legs, and runs from their rage. This aversion to the wolf is natural to all genuine dogs; for it is well known that a whelp, that has never seen a wolf, will at first sight tremble and run to its master for protection; an old dog will naturally attack it.

It is recorded of a dog belonging to a nobleman of the Medici family, that it always attended at its master's table; changed the plates for him; and carried him his wine in a glass placed on a salver, without spilling the smallest drop. It would also hold the stirrup in its teeth, while its master was mounting his horse.

Plutarch relates, that, in the theatre of Marcellus, a dog was exhibited before the emperor Vespasian, so well instructed as to excel in every kind

of dance. He afterwards feigned illness in so natural a manner, as to strike the spectators with astonishment ; first shewing symptoms of pain ; then falling down as if dead, and suffering himself to be carried about in that state ; and afterwards, at the proper time, seeming to revive as if waking from a profound sleep ; and then sporting about and shewing every demonstration of joy.

But of all the educational attainments by which the dog has been distinguished, that of learning to speak seems the most extraordinary. The French academicians, however, make mention of a dog in Germany, which would call, in an intelligible manner, for tea, coffee, chocolate, &c. The account is from no less eminent a person than the celebrated Leibnitz, who communicated it to the Royal Academy of France. This dog was of a middling size, and was the property of a peasant in Saxony. A little boy, the peasant's son, imagined that he perceived in the dog's voice an indistinct resemblance to certain words, and therefore took it into his head to teach him to speak. For this purpose he spared neither time nor pains with his pupil, who was about three years old when this his learned education commenced ; and at length he made such a progress in language, as to be able to articulate so many as thirty words. It appears, however, that he was somewhat of a truant, and did not very willingly exert his talents, being in a manner pressed into the service of literature ; and it was necessary that the words should be first pronounced to him each time, which he then echoed from his preceptor. Leibnitz, however, declares that he himself heard him speak ; and the French academicians add, that unless they had received the testimony of so great a man as Leibnitz, they should scarcely have dared to report the circum-

stance. This wonderful dog was born at Zeitz in Misnia, in Saxony.

A little dog, if advices from Sweden may be credited, was some years ago exhibited at Stockholm, which had been taught to speak many words, and to utter even complete sentences, in French and Swedish. *Vive le Roi* he uttered very gracefully.

The dog, when first whelped, is not a completely finished animal. In this kind, as in all the rest which bring forth many at a time, the young are not so perfect as in those which bring forth one or two. They are always produced with the eyes closed, the lids being held together, not by sticking, but by a kind of thin membrane, which is torn as soon as the upper eye-lid becomes strong enough to raise it from the under. In general, their eyes are not opened till ten or twelve days old. During that time, the bones of the skull are not completed, the body is puffed up, the nose is short, and the whole form but ill-sketched out. In less than a month the puppy begins to use all its senses ; and from thence makes hasty advances to its perfection. At the fourth month, the dog loses some of his teeth, as in other animals, and these are renewed by such as never fall. The number of these amount to forty-two, which is twelve more than is found in any of the cat kind, which are known never to have above thirty. The teeth of the dog, being his great and only weapon, are formed in a manner much more serviceable than those of the former ; and there is scarce any quadruped that has a greater facility in rending, cutting, or chewing its food. He cuts with his incisors, or fore teeth, he holds with his four great canine teeth, and he chews his meat with his grinders ; these are fourteen in number, and so placed, that, when the jaws are shut, there



remains a distance between them, so that the dog, by opening his mouth ever so wide, does not lose the power of his jaws. But it is otherwise in the cat kind, whose incisors, or cutting teeth, are very small, and whose grinding teeth when brought together, touch more closely than those of the dog, and, consequently, have less power. Thus, for instance, we can squeeze any thing more forcibly between our thumb and fore finger, where the distance is greater, than between any other two fingers, whose distance from each other is less.

This animal is capable of reproducing at the age of twelve months, goes nine weeks with young, and lives to about the age of twelve years. Few quadrupeds are less delicate in their food ; and yet there are many kinds of birds which the dog will not venture to touch. He is even known, although in a savage state, to abstain from injuring some which one might suppose he had every reason to oppose. The dogs and the vultures which live wild about Grand Cairo in Egypt (for the Mahometan law has expelled this useful animal from human society,) continue together in a very sociable and friendly manner.

Although the dog is a voracious animal, yet he can bear hunger for a very long time. We have an instance, in the Memoirs of the Academy of Sciences, of this kind, in which a bitch that had been forgotten at a country house, lived forty days without any other nourishment than the wool of a quilt which she had torn in pieces. It should seem that water is more necessary to the dog than food ; he drinks often, though not abundantly ; and it is commonly believed, that when abridged in water, he runs mad. This dreadful malady, the consequences of which are so well known, is the greatest inconvenience that results from the keep-

ing this faithful domestic. But it is a disorder by no means so frequent as the terrors of the timorous would suppose; the dog has been often accused of madness without a fair trial; and some persons have been supposed to receive their deaths from his bite, when either their own ill-grounded fears, or their natural disorders were the true cause.

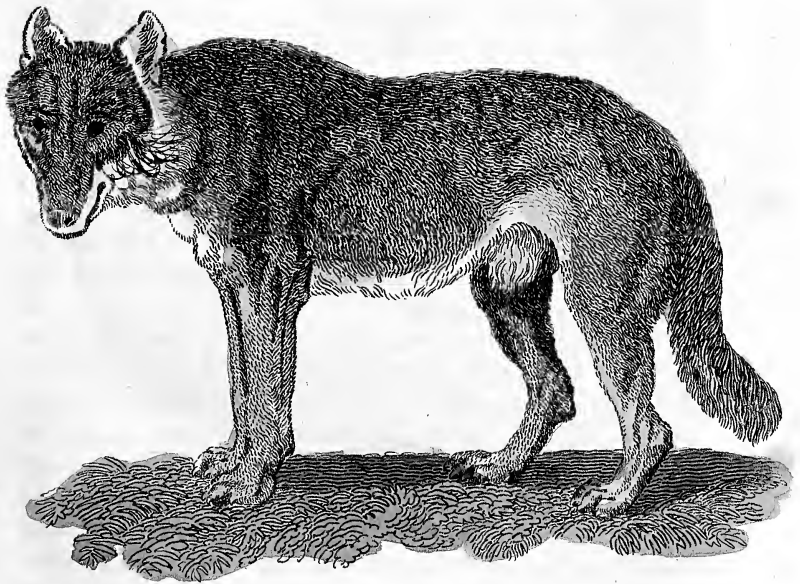
## WOLF.

THE dog and the wolf are so very much alike internally, that the most expert anatomists can scarcely perceive the difference; and it is even asserted, that, externally, some dogs more nearly resemble the wolf than they do each other. It was this strong similitude that first led some naturalists to consider them as the same animal, and to look upon the wolf as the dog in its state of savage freedom; however, this opinion does not seem to be well founded; the natural antipathy those two animals bear to each other, the longer time which the wolf goes with young than the dog, the one going over an hundred days, and the other not quite sixty, the longer period of life in the former than the latter, the wolf living twenty years, the dog not fifteen, all sufficiently point out a distinction, and draw a line that must forever keep them asunder.

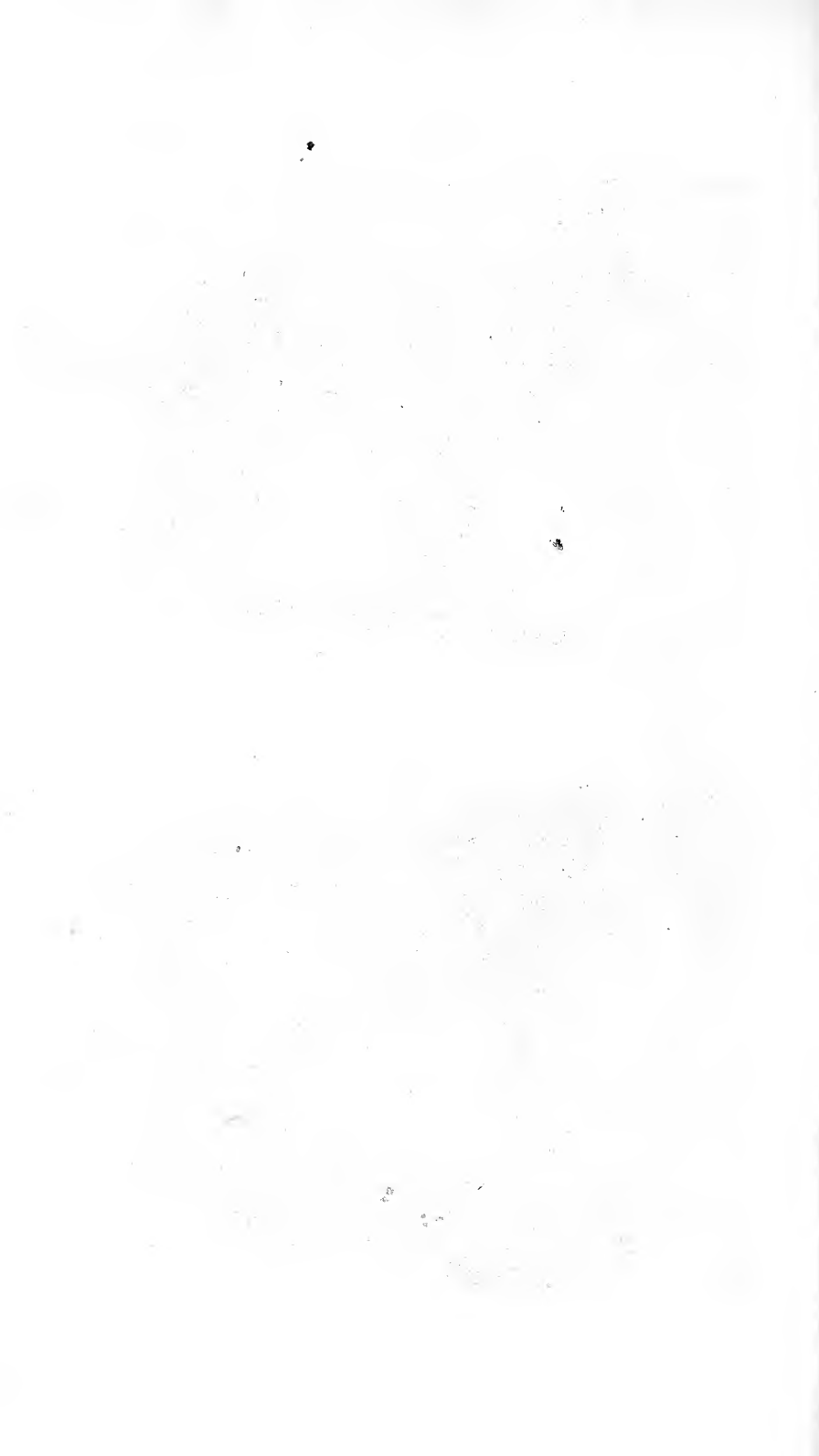
The wolf, from the tip of the nose to the insertion of the tail, is about three feet seven inches long, and about two feet five inches high, which shows him to be larger than our great breed of mastiffs, which are seldom found to be above three feet by two. His colour is a mixture of black, brown, and grey, extremely rough and hard, but mixed towards the roots with a kind of ash-coloured fur. In comparing him to any of



SHEPHERD'S DOG



WOLF



our well-known breed of dogs, the great Dane, or mongrel greyhound, for instance, he will appear to have the legs shorter, the head larger, the muzzle thicker, the eyes smaller, and more separated from each, and the ears shorter and straighter. He appears in every respect stronger than the dog; and the length of the hair contributes still more to his robust appearance. The feature which principally distinguishes the visage of the wolf from that of the dog, is the eye, which opens slantingly upwards, in the same direction with the nose; whereas, in the dog, it opens more at right angles with the nose, as in man. The tail, also, in this animal, is long and bushy; and he carries it rather more between his hind legs than the dog is seen to do. The colour of the eye-balls in the wolf are of a fiery green, and give his visage a fierce and formidable air, which his natural disposition does by no means contradict.

The wolf is, says Buffon, one of those animals whose appetite for animal food is the most vehement; and whose means of satisfying this appetite are the most various. Nature has furnished him with strength, cunning, agility, and all those requisites which fit an animal for pursuing, overtaking, and conquering its prey; and yet, with all these, the wolf most frequently dies of hunger, for he is the declared enemy of man. Being long proscribed, and a reward offered for his head, he is obliged to fly from human habitations, and to live in the forest, where the few wild animals to be found there escape him, either by their swiftness or their art; or are supplied in too small a proportion to satisfy his rapacity. He is naturally dull and cowardly; but frequently disappointed, and, as often reduced to the verge of famine, he becomes ingenious from want, and courageous from necessity. When pressed with hun-

ger, he braves danger, and comes to attack those animals which are under the protection of man, particularly such as he can readily carry away, lambs, sheep, or even dogs themselves, for all animal food becomes then equally agreeable. When this excursion has succeeded, he often returns to the charge, until having been wounded, or hard pressed by the dogs or the shepherds, he hides himself by day in the thickest covets and only ventures out at night ; he then sallies forth over the country, keeps peering round the villages, carries off such animals as are not under protection, attacks the sheep-folds, scratches up and undermines the thresholds of doors where they are housed, enters furious, and destroys all before he begins to fix upon and carry off his prey. When these sallies do not succeed, he then returns to the thickest part of the forest, content to pursue those smaller animals, which, even when taken, afford him but a scanty supply. He there goes regularly to work, follows by the scent, opens to the view, still keeps following, hopeless himself of overtaking the prey, but expecting that some other wolf will come in to his assistance, and then content to share the spoil. At last, when his necessities are very urgent, he boldly faces certain destruction ; he attacks women and children, and sometimes ventures even to fall upon men, becomes furious by his continual agitations, and ends his life in madness.

The wolf, as well externally as internally, so nearly resembles the dog, that he seems modelled upon the same plan ; and yet he only offers the reverse of the model. If his form be like, his nature is so different, that he only preserves the ill qualities of the dog, without any of his good ones. Indeed, they are so different in their dispositions, that no two animals can have a more perfect anti-

pathy to each other. A young dog shudders at the sight of a wolf; he even shuns his scent, which, though unknown, is so repugnant to his nature, that he comes trembling to take protection near his master. A dog who is stronger, and who knows his strength, bristles up at the sight, testifies his animosity, attacks him with courage, endeavours to put him to flight, and does all in his power to rid himself of a presence that is hateful to him. They never meet without either flying or fighting; fighting for life and death, and without mercy on either side. If the wolf is the stronger, he tears and devours his prey; the dog, on the contrary, is more generous, and contents himself with his victory; he does not seem to think that *the body of a dead enemy smells well*; he leaves him where he falls, to serve as food for birds of prey, or for other wolves, since they devour each other; and when one wolf happens to be desperately wounded, the rest track him by his blood, and are sure to show him no mercy.

The dog, even in his savage state, is not cruel; he is easily tamed, and continues firmly attached to his master. The wolf, when taken young, becomes tame, but never has an attachment; nature is stronger in him than education; he resumes, with age, his natural dispositions, and returns, as soon as he can, to the woods from whence he was taken. Dogs, even the dullest kinds, seek the company of other animals; they are naturally disposed to follow and accompany other creatures besides themselves; and even by instinct, without any education, take to the care of flocks and herds. The wolf, on the contrary, is the enemy of all society: he does not even keep much company with those of his kind. When they are seen in packs together, it is not to be considered as a peaceful society, but a combination for war; they

testify their hostile intentions by their loud howlings, and, by their fierceness, discover a project for attacking some great animal, such as a stag or a bull, or to destroy some more redoubtable watch-dog. The instant their military expedition is completed, their society is at an end ; they then part, and each returns in silence to his solitary retreat. There is not even any strong attachments between the male and female ; they seek each other only once a year, and remain but a few days together ; they always couple in winter ; at which time several males are seen following one female, and this association is still more bloody than the former ; they dispute most cruelly, growl, bark, fight, and tear each other ; and it sometimes happens, that the majority kill the wolf, which has been chiefly preferred by the female. It is usual for the she-wolf to fly from them all with him she has chosen ; and watches this opportunity when the rest are asleep.

The time of pregnancy is about three months and a half ; and the young wolves are found from the latter end of April, to the beginning of July. When the she-wolves are near their time to bring forth, they seek some very tufted spot, in the thickest part of the forests ; in the middle of this they make a small opening, cutting away the thorns and briars with their teeth, and afterwards carry thither a great quantity of moss, which they form into a bed for their young ones. They generally bring forth five or six, and sometimes even to nine at a litter. The cubs are brought forth, like those of the bitch, with the eyes closed ; the dam suckles them for some weeks, and teaches them betimes to eat flesh, which she prepares for them, by chewing it first herself. Some time after she brings them stronger food, hares, partridges, and birds yet alive. The young



wolves begin by playing with them, and end by killing them. The dam then strips them of their feathers, tears them in pieces, and gives to each of them a share. They do not leave the den where they have been littered, till they are six weeks, or two months old. They then follow the old one, who leads them to drink to the trunk of some old tree, where the water has settled, or at some pool in the neighbourhood. If she apprehends any danger, she instantly conceals them in the first convenient place, or brings them back to their former retreat. In this manner they follow her for some months ; when they are attacked, she defends them with all her strength, and more than usual ferocity. Although, at other times, more timorous than the male, at that season she becomes bold and fearless ; willing perhaps to teach the young ones future courage by her own example. It is not till they are about ten or twelve months old, and until they have shed their first teeth, and completed the new, that she thinks them in a capacity to shift for themselves. Then, when they have acquired arms from nature, and have learned industry and courage from her example, she declines all future care of them, being again engaged in bringing up a new progeny.

The wolf grows grey as he grows old, and his teeth wear like those of most other animals, by using. He sleeps when his belly is full, or when he is fatigued, rather by day than night ; and always, like the dog, is very easily waked. He drinks frequently ; and in times of drought, when there is no water to be found in the trunks of old trees, or in the pools about the forest, he comes often, in the day, down to the brooks, or the lakes in the plain. Although very voracious, he supports hunger for a long time, and often lives

four or five days without food, provided he be supplied with water.

The wolf has great strength, particularly in his fore parts, in the muscles of his neck and jaws. He carries off a sheep in his mouth without letting it touch the ground, and runs with it much swifter than the shepherds who pursue him ; so that nothing but the dogs can overtake, and oblige him to quit his prey. He bites cruelly, and always with greater vehemence in proportion as he is least resisted ; for he uses precautions with such animals as attempt to stand upon the defensive. He is ever cowardly, and never fights but when under a necessity of satisfying hunger, or making good his retreat. When he is wounded by a bullet, he is heard to cry out ; and yet, when surrounded by the peasants, and attacked with clubs, he never howls as the dog under correction, but defends himself in silence, and dies as hard as he lived.

His nature is, in fact, more savage than that of the dog ; he has less sensibility and greater strength. He travels, runs, and keeps plundering for whole days and nights together. He is in a manner indefatigable ; and perhaps of all animals, he is most difficult to be hunted down. The dog is good natured and courageous ; the wolf, though savage, is ever fearful. If he happens to be caught in a pit-fal, he is for some time so frightened and astonished, that he may be killed without offering to resist, or taken alive without much danger. At that instant, one may clap a collar round his neck, muzzle him, and drag him along, without his ever giving the least signs of anger or resentment. At all other times he has his senses in great perfection ; his eye, his ear, and particularly his sense of smelling, which is even superior to the two former. He smells a carcase at more than a league's distance ; he also

perceives living animals a great way off, and follows them a long time upon the scent. Whenever he leaves the wood, he always takes care to go out against the wind. When just come to its extremity, he stops to examine, by his smell, on all sides, the emanations that may come either from his enemy or his prey, which he very nicely distinguishes. He prefers those animals which he kills himself to those he finds dead; and yet he does not disdain these when no better is to be had. He is particularly fond of human flesh; and perhaps, if he was sufficiently powerful, he would eat no other. Wolves have been seen following armies, and arriving in numbers upon the field of battle, where they devoured such dead bodies as were left upon the field, or but negligently interred. These, when once accustomed to human flesh, ever after seek particularly to attack mankind, and choose to fall upon the shepherd rather than his flock. We have had, continues Buffon, a late instance of two or three of these keeping a whole province, for more than a month, in a continual alarm.

It sometimes happens that a whole country is called out to extirpate these most dangerous invaders. The hunting the wolf is a favourite diversion among the great of some countries; and it must be confessed it seems to be the most useful of any. These animals are distinguished by the huntsmen into the young wolf, the old wolf, and the great wolf. They are known by the prints of their feet; the older the wolf, the larger the track he leaves. That of the female is narrower and longer than that of the male. It is necessary to have a very good starter to put up the wolf; and it is even convenient to use every art to encourage him in his pursuit; for all dogs have a natural repugnance against this animal, and are but

cold in their endeavours. When the wolf is once put up, it is then proper to have grey-hounds to let fly at him, in leashes, one after the other. The first leash is sent after him in the beginning, seconded by a man on horseback ; the second are let loose about half a mile farther, and the third when the rest of the dogs come up with him and begin to bait him. He for a long time keeps them off, stands his ground, threatens them on all sides, and often gets away ; but usually the hunters, arriving, come in aid of the dogs, and help to dispatch him with their cutlasses. When the animal is killed, the dogs testify no appetite to enjoy their victory, but leave him where he falls, a frightful spectacle, and even in death hideous.

The wolf is sometimes also hunted with harriers ; but as he always goes straight forward, and often holds his speed for a whole day together, this kind of chase is tedious and disagreeable, at least if the harriers are not assisted by grey-hounds, who may harass him at every view. Several other arts have been also used to take and destroy this noxious animal. He is surrounded and wounded by men and large house-dogs ; he is secured in traps ; he is poisoned by carcasses, prepared and placed for that purpose, and is caught in pit-falls. Gesner tells us of a friar, a woman, and a wolf, being taken in one of these, all in the same night. The woman lost her senses with the fright, the friar his reputation, and the wolf his life. All these disasters, however, do not prevent this animal's multiplying in great numbers, particularly in countries where the woods are plenty. France, Spain, and Italy, are greatly infested with them ; but England, Ireland, and Scotland, are happily set free.

King Edgar is said to be the first who attempted

to rid this kingdom of such disagreeable inmates, by commuting the punishment for certain crimes, into the acceptance of a number of wolf's tongues from each criminal. However, some centuries after, these animals were again increased to such a degree, as to become the object of royal attention; accordingly Edward I. issued out his mandate to one Peter Corbet, to superintend and assist in the destruction of them.

The last wolf known in this island was killed in Scotland by the famous sir Ewen Cameron, in 1680. They continued but a few years longer in Ireland: for the last that has been heard of running wild in that island was killed in 1710. English records make no mention of their infesting that country later than 1281.

The colour of this animal differs according to the different climates where it is bred, and often changes even in the same country. Besides the common wolves, which are found in France and Germany, there are others with thicker hair, inclining to yellow. These are more savage and less noxious than the former, neither approaching the flocks nor habitations, and living rather by the chase than rapine. In the northern climates there are found some quite black, and some white all over. The former are larger and stronger than those of any other kinds.

The species is very much diffused in every part of the world, being found in Asia, Africa, and in America, as well as Europe.

In the wolf there is nothing valuable but his skin which makes a warm and durable fur. His flesh, is so bad, that it is rejected with abhorrence by all other quadrupeds; and no animal but a wolf will voluntarily eat a wolf.

## MEXICAN WOLF.

THIS species has a very large head, ash-coloured, striped transversely with bending dusky lines ; great jaws, vast teeth ; with very strong bristles on the upper lips, reflected backwards, not unlike the softer spines of a porcupine : its colour is grey and white ; its ears are large, erect, and ash-coloured ; the space between them is marked with broad tawny spots : its neck is fat and thick, covered with a loose skin, marked with a long tawny stroke ; on the breast is another of the same kind ; the body is ash-coloured, spotted with black ; and the sides are striped, from the back downwards, with the same colour ; the belly is cinereous ; the tail long, of the colour of the belly, tinged in the middle with tawny ; the legs and feet are striped with black and ash-colour. This is the most beautiful of all wolves, and its skin should be esteemed for its variety of colours. Sometimes it is found white. It inhabits the hot parts of Mexico or New Spain ; and agrees with the European wolf in its manners. It attacks cattle, and sometimes men. No wolves are found farther south on the new continent.

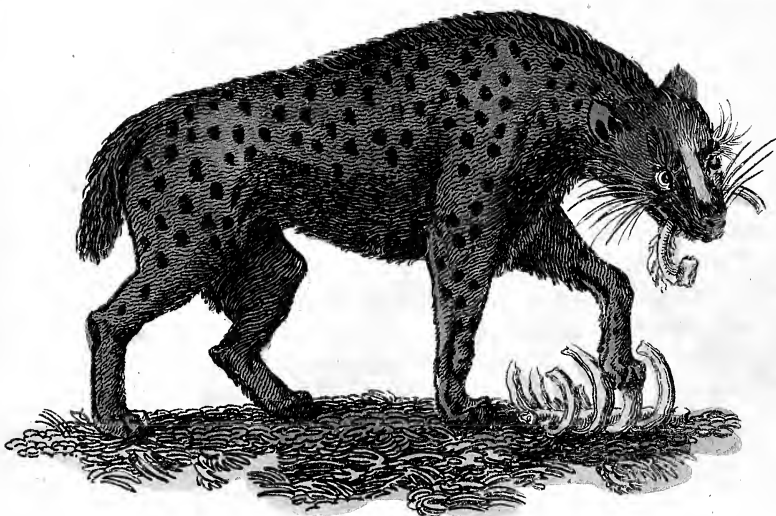
## BLACK WOLF.

THIS animal, considered by Buffon and others as a variety only of the common wolf, is at present regarded as a distinct species. Like the common wolf, it is found both in Europe and America, as well as in some parts of Asia. It bears a great general resemblance to the common species, but is smaller, entirely black, with a somewhat thinner, or less bushy tail, hanging nearly straight ; the ears are larger in proportion than those of the





HYAENA.



SPOTTED HYAENA.



common wolf, and the eyes smaller, and situated at a great distance from each other. In America, the black wolf is chiefly found in Canada, and in Europe occurs only in the more northern regions. Its fur is much inferior to that of the common wolf.

#### HYÆNA, OR STRIPED HYÆNA.

THE hyæna is a native of Asiatic Turkey, Syria, Persia, and many parts of Africa. It is about the size of a large dog, of a pale greyish brown, and marked across with several distant blackish bands. The hair of its neck is erect, and is continued in a bristly mane along the back. The tail is rather short, and very bushy. The head is broad and flat, and the eyes have an expression of great wildness and ferocity.

The hyænas generally inhabit caverns and rocky places; prowling about in the night to feed on the remains of dead animals, or on whatever living prey they can seize. They violate the repositories of the dead, and greedily devour the putrid corpse. They likewise prey on cattle, and frequently commit great devastation among the flocks; yet, when other provisions fail, they will eat the roots of plants, and the tender shoots of the palms. They sometimes assemble in troops, and follow the march of an army, in order to feast on the slaughtered bodies.

The cry of the hyæna is very peculiar. It begins with somewhat like the moaning of the human voice, and ends like that of a person making a violent effort to vomit. His courage is said to equal his rapacity. He will occasionally defend himself with great obstinacy against much larger animals. Kaempfer relates, that he saw one which had put to flight two lions; and that he has often

known it to attack the ounce and the panther. There is something in its aspect that indicates a peculiar gloominess and malignity of disposition ; and its manners correspond with its appearance. Instances have occurred of this creature being tamed. Mr. Pennant says, that he saw a hyæna as tame as a dog ; and the Comte de Buffon, that there was one shewn at Paris that had been tamed very early, and was apparently divested of all its natural ferocity. In Barbary, Mr. Bruce assures us that he has seen the Moors, in the day-time, take this animal by the ears, and haul him along, without his offering any other resistance than that of drawing back. And the hunters will take a torch in their hand, go into his cave, and, pretending to fascinate him by a senseless jargon of words, throw a blanket over him and drag him out.

Mr. Bruce locked up a goat, a kid, and a lamb, all day with a Barbary hyæna, when it was fasting, and found them in the evening alive and unhurt ; but on his repeating an experiment of this kind one night, it ate up a young ass, a goat, and a fox, all before morning, so as to leave nothing but some fragments of the ass's bones. In Barbary, therefore, the hyænas seem to lose their courage, and fly from man by day ; but in Abyssinia, they often prowl about in the open day, and attack, with savage fury, every animal they meet with.—“ These creatures were” says Mr. Bruce “ a general scourge to Abyssinia, in every situation, both in the city and in the field ; and, I think, surpassed the sheep in number. Gondar was full of them, from evening till the dawn of day ; seeking the different pieces of slaughtered carcasses which this cruel and unclean people expose in the streets without burial, and who firmly believe that these animals are Falasha, from the neighbouring moun-

tains, transformed by magic, and come down to eat human flesh in the dark with safety. Many a time in the night, when the king had kept me late in the palace, and it was not my duty to lie there, in going across the square from the king's house, not many hundred yards distant, I have been apprehensive lest they should bite me in the leg. They grunted in great numbers about me, although I was surrounded with several armed men, who seldom passed a night without wounding or slaughtering some of them.

One night in Maitsha, being very intent on an observation, I heard something pass behind me towards the bed; but, upon looking round, could perceive nothing. Having finished what I was then about, I went out of my tent, resolving directly to return, which I immediately did; when I perceived two large blue eyes glaring at me in the dark. I called up my servant with a light; and we found a hyæna standing near the head of the bed, with two or three large bunches of candles in his mouth. To have fired at him, would have been at the risk of breaking my quadrant, or other furniture; and he seemed, by keeping the candles steadily in his mouth, to wish for no other prey at that time. As his mouth was full, and he had no claws to tear with, I was not afraid of him; and, with a pike, stuck him as near the heart as I could. It was not till then that he shewed any sign of fierceness; but, upon feeling his wound, he let drop the candles, and endeavoured to run up the shaft of the spear to arrive at me, so that I was obliged to draw my pistol from my girdle, and shoot him; and nearly at the same time, my servant cleft his skull with a battle-axe. In a word, the hyæna was the plague of our lives, the terror of our night walks, and

the destruction of our mules and asses, which, above every thing else, are his favourite food."

At Dar-Fûr, a kingdom in the interior of Africa, the hyænas come in herds of six, eight, and often more, into the villages at night, and carry off with them whatever they are able to master. They will kill dogs and asses, even within the inclosure of the houses; and always assemble wherever a dead camel or other animal is thrown, which, acting in concert, they drag to a prodigious distance; nor are they greatly alarmed at the sight of men, or the report of fire-arms. Mr. Brown was told, that whenever any one of them was wounded, its companions would always instantly tear it to pieces and devour it.

A remarkable peculiarity in this animal, though sometimes observed in dogs, is, that when he is first dislodged from cover, or obliged to run, he always appears lame for a considerable distance; and sometimes to such a degree, according to Mr. Bruce, as to induce the spectators to suppose that one of his hind legs is broken; but after running some time, this affection goes off, and he escapes swiftly away.

The neck is so extremely stiff, that in looking behind, or in snatching obliquely at any object, he is obliged to move his whole body, somewhat in the manner of a hog. When the Arabs take any of these animals, they are very careful to bury the head, lest the brain, according to their superstition, should be used in sorcery or enchantment.

#### SPOTTED HYÆNA, OR TYGER WOLF.

THE spotted hyæna has a considerable resemblance to the former species; but is larger, and marked with numerous roundish black spots.

The face and upper part of the head are black ; and along the neck extends an upright black mane. The ground colour of the body is reddish brown.

These animals are natives of many parts of Africa ; but are peculiarly numerous at the Cape, where they are described as being cruel, mischievous, and formidable. They have been frequently known to enter the huts of the Hottentots in search of prey, from whence they sometimes carry off even the children. One of them, coming into a negro's house, on the coast of Guinea, laid hold of a girl, threw her, in spite of her resistance, on his back, holding fast by one of the legs ; and was making off with her, when the men, whom her screams had roused from sleep, came to her relief. The beast dropped her, and made his escape ; but she was considerably lacerated in different parts of her body by his teeth.

Numbers of them attend, almost every dark night, about the shambles at the Cape, to carry away the filth and offal left there by the inhabitants, who suffer these their scavengers to come and return unmolested. The dogs too, with which at other times they are in continual enmity, do not now molest them ; and on these occasions, it has been remarked, they are seldom known to do any material mischief. Thunberg informs us, that they are so excessively bold and ravenous, as sometimes even to eat the saddle from under the traveller's head, and gnaw the shoes on his feet, while he is sleeping in the open air.

They utter the most horrid yells in the night, while prowling about for prey ; and their propensity to these cries is so implanted in them by nature, that one which was brought up tame at the Cape, was often heard in the night to emit this dreadful noise. During the day, they remain

concealed in holes in the ground, or in clefts of the rocks ; and in the night time they frequently descend upon the sheep-folds, in which, if not well defended by dogs, they commit terrible ravages, killing, like most of their genus, many more than they devour. Some of the inhabitants of the Cape pretend that the hyæna has the power of imitating the cries of other animals, and that by these means it often succeeds in decoying lambs, calves, &c. from the folds. It is also said, that a party of hyænas, half flying and half defending themselves, will decoy the whole of the dogs from a farm to follow them to some distance, while their companions have an opportunity of coming from their retreats, and carrying off sufficient booty before the dogs can return to prevent them.

The inhabitants of Guinea kill them by fixing guns on the outside of the villages, with a piece of carrion fastened to the trigger, and placed near the muzzle, in such a manner, that the moment this bait is touched, the trigger is thereby pulled, and the piece discharged.

## JACKAL.

THE body of the jackal has a great resemblance to that of the fox ; the head, however, is shorter, the nose blunter, and the legs longer. The tail is thickest in the middle, tapers to a point, and is tipped with black. The hair, which is long and coarse, is of a dirty tawny colour, yellowish on the belly. The length of the body is about thirty inches, and of the tail eleven.

The jackal is found in all the hot and temperate parts of Asia ; and in most parts of Africa, from Barbary to the Cape.

In their manners these animals are much allied



JACKALL.



FOX.





to the dog. When taken young, they soon become domestic, attach themselves to mankind, wag their tails when pleased, and distinguish their masters from other persons. They love to be fondled, and patted with the hand; and when called by name, will leap on a table or chair. They eat readily from the hand; and drink as dogs do, by lapping. They are fond of playing with dogs; unlike most others of this genus, which run away from them. Although carnivorous in a wild state, they eat bread eagerly. Mr. Pennant and Dr. Shaw seem of opinion, that they are the stock from which have sprung the various races of these domestic animals.

In their native forests they associate in packs of from fifty to two hundred; where they hunt during the night, like hounds in full cry. They devour poultry and lambs, ravage the streets of villages and gardens near towns, and are said even to destroy children which are left unprotected. They are bold and courageous; sometimes entering the tent of a traveller while he is asleep, and stealing away any thing that is eatable. If animal prey is not to be met with, they will feed on roots and fruit.

They not only attack the living but the dead. They scratch up, with their feet, the new made graves, and devour the corpse, how putrid soever. In those countries, therefore, where they abound, they are obliged to beat the earth over the grave, and mix it with thorns, to prevent the jackals from scraping it away. They always assist each other, as well in this employment of exumation, as in that of the chase. While they are at this dreary work, they exhort each other by a most mournful cry, resembling that of children under chastisement; and when they have thus dug up the body, they share it amicably between them.

These, like all other savage animals, when they have once tasted of human flesh, can never after refrain from pursuing mankind. They watch the burying grounds, follow armies, and keep in the rear of caravans. They may be considered as the vulture of the quadruped kind ; every thing that once had animal life, seems equally agreeable to them ; the most putrid substances are greedily devoured ; dried leather, and any thing that has been rubbed with grease, how insipid soever in itself, is sufficient to make the whole go down.

They hide themselves in holes by day, and seldom appear abroad till night fall, when the jackal that has first hit upon the scent of some large beast, gives notice to the rest by a howl, which it repeats as it runs ; while all the rest that are within hearing, pack in to its assistance. The gazelle, or whatever other beast it may be, finding itself pursued, makes off towards the houses and the towns ; hoping, by that means, to deter its pursuers from following ; but hunger gives the jackal the same degree of boldness that fear gives the gazelle, and it pursues even to the verge of the city, and often along the streets. The gazelle, however, by this means, most frequently escapes ; for the inhabitants sallying out, often disturb the jackal in the chase ; and as it hunts by the scent, when once driven off, it never recovers it again. In this manner we see how experience prompts the gazelle, which is naturally a very timid animal, and particularly fearful of man, to take refuge near him, considering him as the least dangerous enemy, and often escaping by his assistance.

But man is not the only intruder upon the jackal's industry and pursuits. The lion, the tiger, and the panther, whose appetites are supe-

rior to their swiftness, attend to its call, and follow in silence at some distance behind. The jackal pursues the whole night with unceasing assiduity, keeping up the cry, and with great perseverance at last tires down its prey ; but just at the moment it supposes itself going to share the fruits of its labour, the lion or the leopard comes in, satiates himself upon the spoil, and his poor provider must be content with the bare carcase he leaves behind. It is not to be wondered at, therefore, if the jackal be voracious, since it so seldom has a sufficiency ; nor that it feeds on putrid substances, since it is not permitted to feast on what it has newly killed. Besides these enemies, the jackal has another to cope with, for between him and the dog there is an irreconcilable antipathy ; and they never part without an engagement. The Indian peasants often chase them as we do foxes ; and have learned, by experience, when they have got a lion or a tiger in their rear. Upon such occasions they keep their dogs close, as they would be no match for such formidable animals, and endeavour to put them to flight with their cries. When the lion is dismissed, they more easily cope with the jackal, who is as stupid as it is impudent, and seems much better fitted for pursuing than retreating. It sometimes happens that one of them steals silently into an out-house to seize the poultry, or devour the furniture ; but hearing others in full cry at a distance, without thought, it instantly answers the call, and thus betrays its own depredations. The peasants sally out upon it, and the foolish animal finds too late, that its instinct was too powerful for its safety.

## BARBARY JACKAL, OR THALEB.

THE Barbary jackal is about the size of the common fox, and is of a brownish fawn colour. From behind each ear runs a black line ; which soon divides into two, extending downwards along the neck. The tail is bushy, and surrounded by three dusky rings.

This species is found in Egypt ; never in flocks like the common jackal, but always singly. It is a very adroit animal. He ventures to approach, even in the open day, the houses near which he has his subterraneous abode ; and carefully concealed beneath thick bushes, he frequently creeps without noise, surprises the poultry, carries off their eggs, and leaves no traces of his exploits but the devastations themselves. One of his principal talents consists in the hunting of birds ; and in this he exhibits such surprising craft and agility, that very few are able to escape him.

His cunning is strongly depicted in the following narration of M. Sonnini : “ One day, as I was meditating in a garden, I stopped near a hedge. A thaleb, hearing no noise, was coming through the hedge towards me, and when he had cleared himself, was just at my feet. On perceiving me, he was seized with such surprise, that he remained motionless for some seconds, without even attempting to escape, his eyes fixed steadily on me. Perplexity was painted in his countenance, by a degree of expression of which I could not have supposed him susceptible, and which denoted great delicacy of instinct. On my part, I was afraid to move, lest I should put an end to this situation, which afforded me much pleasure. At length, after he had taken a few steps, first to-

wards one side and then the other, as if so confused as not to know which way to get off, and keeping his eyes still turned towards me, he retired ; not running, but stretching himself out, or rather creeping with a slow step, setting down his feet one after another with singular precaution. He seemed so much afraid of making a noise in his flight, that he held up his large tail, almost in an horizontal line, that it might neither drag on the ground nor brush against the plants. On the other side of the hedge I found the fragments of his meal ; that had consisted of a bird of prey, great part of which he had devoured." He is one of the prettiest of quadrupeds.

## FOX.

THE fox very exactly resembles the wolf and the dog internally ; and although he differs greatly from both in size and carriage, yet when we come to examine his shapes minutely, there will appear to be very little difference in the description. Were, for instance, a painter to draw from a natural historian's exactest description the figure of a dog, a wolf, and a fox, without having ever seen either, he would be very apt to confound all these animals together ; or rather he would be unable to catch those peculiar outlines that no description can supply. Words will never give any person an exact idea of forms any way irregular ; for although they be extremely just and precise, yet the numberless discriminations to be attended to, will confound each other, and we shall no more conceive the precise form, than we should be able to tell when one pebble more was added or taken away from a thousand. To conceive, therefore, how the fox differs in form from the wolf or the dog, it is necessary to see all three.

or at least to supply the defects of description by examining the difference in a print.

The fox is of a slenderer make than the wolf, and not near so large ; for as the former is above three feet and a half long, so the other is not above two feet three inches. The tail of the fox also is longer in proportion, and more bushy ; its nose is smaller, approaching more nearly to that of the grey-hound, and its hair softer. On the other hand, it differs from the dog in having eyes obliquely situated, like those of the wolf ; its ears are directed also in the same manner as those of the wolf, and its head is equally large in proportion to its size. It differs still more from the dog in its strong offensive smell, which is peculiar to the species, and often the cause of their death. However, some are ignorantly of opinion that it will keep off infectious diseases, and they preserve this animal near their habitations for that very purpose.

The fox has since the beginning been famous for his cunning and his arts, and he partly merits his reputation. Without attempting to oppose either the dogs or the shepherds, without attacking the flock, or alarming the village, he finds an easier way to subsist, and gains by his address what is denied to his strength or courage. Patient and prudent, he waits the opportunity of depredation, and varies his conduct with every occasion. His whole study is his preservation ; although nearly as indefatigable, and actually more swift than the wolf, he does not entirely trust to either, but makes himself an asylum, to which he retires in case of necessity ; where he shelters himself from danger, and brings up his young.

As among men, those who lead a domestic life are more civilized and more endued with wisdom, than those who wander from place to place ; so,

in the inferior ranks of animated nature, the taking possession of a home supposes a degree of instinct which others are without. The choice of the situation for this domicile, the art of making it convenient, of hiding its entrance, and securing it against more powerful animals, are all so many marks of superior skill and industry. The fox is furnished with both, and turns them to his advantage. He generally keeps his kennel at the edge of the wood, and yet within an easy journey of some neighbouring cottage. From thence he listens to the crowing of the cock, and the cackling of the domestic fowls. He scents them at a distance ; he seizes his opportunity, conceals his approaches, creeps slyly along, makes the attack, and seldom returns without his booty. If he be able to get into the yard, he begins by levelling all the poultry without remorse, and carrying off a part of the spoil, hides it at some convenient distance, and again returns to the charge. Taking off another fowl in the same manner, he hides that also, but not in the same place ; and this he practises for several times together, until the approach of day, or the noise of the domestics, give him warning to retire. The same arts are practised when he finds birds entangled in springes laid for them by the fowler ; the fox takes care to be before-hand, very expertly takes the bird out of the snare, hides it for three or four days, and knows very exactly when and where to return to avail himself of hidden treasure. He is equally alert in seizing the young hares and rabbits before they have strength enough to escape him, and when the old ones are wounded and fatigued, he is sure to come upon them in their moments of distress, and to show them no mercy. In the same manner he finds out birds' nests, seizes the partridge and the quail while sitting, and destroys a large quan-

tity of game. The wolf is most hurtful to the peasant, but the fox to the gentleman. In short, nothing that can be eaten seems to come amiss; rats, mice, serpents, toads, and lizards. He will, when urged by hunger, eat vegetables and insects; and those that live near the sea-coasts will, for want of other food, eat crabs, shrimps, and shell-fish. The hedge-hog in vain rolls itself up into a ball to oppose him, this determined glutton teazes it until it is obliged to appear uncovered, and then he devours it. The wasp and the wild bee are attacked with equal success. Although at first they fly out upon the invader, and actually oblige him to retire, this is but for a few minutes, until he has rolled himself upon the ground, and thus crushed such as stick to his skin; he then returns to the charge, and at last, by perseverance, obliges them to abandon their combs; which he greedily devours, both wax and honey.

The chase of the fox requires less preparation than that of the wolf, and it is also more pleasant and amusing. As dogs have a natural repugnance to pursue the wolf, so they are equally alert in following the fox; which they prefer even to the chase of the hare or the buck. The huntsmen, as upon other occasions, have their cant terms for every part of this chase. The fox the first year is called *a cub*; the second, *a fox*; and the third, an *old fox*; his tail is called the *brush* or *drag*, and his excrement the *billiting*. He is usually pursued by a large kind of harrier or hound, assisted by terriers, or a smaller breed, that follow him into his kennel, and attack him there. The instant he perceives himself pursued, he makes to his kennel, and takes refuge at the bottom of it, where for a while he loses the cry of his enemies; but the whole pack coming to the mouth, redouble their vehemence and rage, and the little terrier



boldly ventures in. It often happens that the kennel is made under a rock, or among the roots of old trees ; and in such cases the fox cannot be dug out, nor is the terrier able to contend with him at the bottom of his hole. By this contrivance he continues secure ; but when he can be dug out, the usual way is to carry him in a bag to some open country, and there set him loose before the hounds. The hounds and the men follow, barking and shouting wherever he runs ; and the body being strongly employed, the mind has not time to make any reflection on the futility of the pursuit. What adds to this entertainment is the strong scent which the fox leaves, that always keeps up a full cry : although his scent is stronger than that of the hare, it is much sooner evaporated. His shifts to escape when all retreat is cut off to his kennel, are various and surprising. He always chooses the most woody country, and takes those paths that are most embarrassed with thorns and briers. He does not double, nor use the unavailing shifts of the hare ; but flies in a direct line before the hounds, though at no very great distance ; manages his strength ; takes to the low and plashy grounds, where the scent will be less apt to lie ; and at last, when overtaken, he defends himself with desperate obstinacy, and fights in silence to the very last gasp.

The fox, though resembling the dog in many respects, is nevertheless very distinct in his nature, refusing to engender with it ; and though not testifying the antipathy of the wolf, yet discovering nothing more than indifference. This animal also brings forth fewer at a time than the dog, and that but once a year. Its litter is generally from four to six, and seldom less than three. The female goes with young about six weeks,

and seldom stirs out while pregnant, but makes a bed for her young, and takes every precaution to prepare for their production. When she finds the place of their retreat discovered, and that her young have been disturbed during her absence, she removes them one after the other in her mouth, and endeavours to find them out a place of better security. A remarkable instance of this animal's parental affection happened in the county of Essex. A she fox that had, as it should seem, but one cub, was unkennelled by a gentleman's hounds near Chelmsford, and hotly pursued. In such a case, when her own life was in imminent peril, one would think it was not a time to consult the safety of her young ; however, the poor animal, braving every danger, rather than leave her cub behind to be worried by the dogs, took it up in her mouth, and ran with it in this manner for some miles. At last, taking her way through a farmer's yard, she was assaulted by a mastiff, and was obliged to drop her cub, which was taken up by the farmer. The faithful creature escaped the pursuit, and at last got off in safety.

The cubs of the fox are born blind, like those of the dog ; they are eighteen months or two years in coming to perfection, and live about twelve or fourteen years.

As the fox makes war upon all animals, so all others seem to make war upon him. The dog hunts him with peculiar acrimony ; the wolf is still a greater and more necessitous enemy, who pursues him to his very retreat. But the fox is not hunted by quadrupeds alone ; for the birds, who know him for their mortal enemy, attend him in his excursions, and give each other warning of their approaching danger. The daw, the magpye, and the blackbird, conduct him along, perching on the hedges as he creeps below,

and, with their cries and notes of hostility, apprize all other animals to beware ; a caution which they perfectly understand, and put into practice. The hunters themselves are often informed by the birds of the place of his retreat, and set the dogs into those thickets where they see them particularly noisy and querulous. So that it is the fate of this petty plunderer to be detested by every rank of animals ; all the weaker classes shun, and all the stronger pursue him.

The fox, of all wild animals, is most subject to the influence of climate ; and there are found as many varieties in this kind almost as in any of the domestic animals. The generality of foxes, as is well known, are red ; but there are some, though not in England, of a greyish cast ; and M. Buffon asserts, that the tip of the tail in all foxes is white ; which, however, is not so in those of this country. There are only three varieties of this animal in Great Britain, and these are rather established upon a difference of size than of colour or form. The grey-hound fox is the largest, tallest, and boldest ; and will attack a grown sheep. The mastiff fox is less, but more strongly built. The cur fox is the least and most common ; he lurks about hedges and out-houses, and is the most pernicious of the three to the peasant and the farmer.

Of all animals, the fox has the most significant eye ; by which is expressed every passion of love, fear, hatred, &c. He is remarkably playful ; but, like all savage creatures half reclaimed, will, on the least offence, bite even those with whom he is most familiar. He is never to be fully tamed. He languishes when deprived of liberty ; and if kept too long in a domestic state, he dies of melancholy. When abroad, he is often seen to amuse himself with his fine bushy tail, running sometimes for a

considerable time in circles to catch it. In cold weather he wraps it about his nose.

The fox is very common in Japan. The natives believe him to be animated by the devil ; and their historical and sacred writings are all full of strange accounts respecting him. New England is said to have been early stocked with foxes by a gentleman who imported some from Europe for the pleasure of the chase. The present breed in that country are supposed to have sprung from these. They are there believed to be very destructive to lambs ; and a reward is given of two shillings a head, for their extirpation.

#### ARCTIC FOX, OR ISATIS.

THIS species, which is smaller than the common fox, has a sharp nose, and sharp rounded ears, almost hid in its fur ; its hair is long and soft, and very thick ; its legs are short, having the toes covered with fur like those of a hare ; its tail is shorter and more bushy than that of the common fox, of a bluish grey, or ash colour, sometimes white ; the young of the grey are blackish before they come to maturity ; their hair is much longer in winter than in summer, as is usual with animals in cold climates.

They inhabit the countries bordering on the Frozen sea, as far as the land is destitute of woods, which is generally from seventy to sixty-five degrees of latitude ; this species extends to Kamtschatka, and Bering's, and Copper islands ; but are found in none of the other islands between Kamtschatka and the other opposite parts of America, discovered by captain Bering in 1741. They are found in Greenland, Iceland, Spitzbergen, Nova Zembla, and Lapland, and once in four or five years in Hudson's Bay : they burrow

under ground, in holes many feet in length, the bottom of which they line with moss. In Greenland and Spitzbergen, they live in the clefts of the rocks, not being able to burrow, by reason of the frost. Two or three inhabit the same hole. They are in heat about Lady-day, and continue during that time in the open air ; they afterwards take to their holes, and go with young nine weeks, like dogs, which they resemble in other respects also. The Russians, indeed, call them dogs ; but they have all the cunning of the common fox, and prey on the young of geese, ducks, and other water-fowl before they can fly ; on the grouse and hares of the country ; on the eggs of birds ; and in Greenland, through necessity, on berries, shell-fish, or any thing the sea throws out ; but their principal food in the north of Asia, and in Lapland, is the leming, or Lapland rat ; and hence, they are very migratory, following the leming, a very wandering animal. Sometimes these foxes desert the country for three or four years, probably as long as they can find prey. The people in Jensea suppose they go to the banks of the Oby. They are taken in traps, and often the glutton and great owl destroy them before the hunter can take them out. They are killed for their fur ; which is light and warm, but not durable : the blue skins are the best.

They are the hardiest of animals, and will pursue their prey during the long, dreary, polar winters.

Steller has given us an ample and entertaining description of their manners.

“ During my unfortunate abode,” says he, “ on Bering’s island, I had but too many opportunities of studying the nature of these animals ; which far exceed the common fox in impudence, cunning, and roguery. The narrative of the innumerable

tricks they played us, might vie with Albertus Julius' history of the apes on the island of Saxenburg.

“ They forced themselves into our habitations by night as well as by day, stealing all that they could carry off ; even things that were of no use to them, as knives, sticks, and clothes. They were so extremely ingenious, as to roll down our casks of provisions, several *poods* (quarters) in weight ; and then steal the meat out with such skill, that, at first, we could not bring ourselves to ascribe the theft to them. While employed in stripping an animal of its skin, it has often happened that we could not avoid stabbing two or three foxes, from their rapacity in tearing the flesh out of our hands. If we buried it ever so carefully, and even added stones to the weight of earth that was upon it ; they not only found it out, but with their shoulders pushed away the stones by lying under them, and in this manner helping one another. If, in order to secure it, we put any animal on the top of a high post in the air ; they either dug up the earth at the bottom, and thus tumbled the whole down, or one of them climbed up, and with incredible artifice and dexterity threw down what was upon it.

“ They watched all our motions, and accompanied us in whatever we were about to do. If the sea threw up an animal of any kind, they devoured it before we could arrive to rescue it from them ; and if they could not consume the whole of it at once, they trailed it in portions to the mountains, where they buried it under stones before our eyes, running to and fro so long as any thing remained to be conveyed away. While this was doing, others stood on guard and watched us. If they saw any one coming at a distance, the whole troop would combine at once, and begin

digging altogether in the sand, till even a beaver or sea-bear in their possession, would be completely buried under the surface, that not a trace of it could be seen. In the night-time, when we slept in the field, they came and pulled off our night-caps, and stole our gloves from under our heads, with the beaver-coverings, and the skins that we lay upon. In consequence of this, we always slept with our clubs in our hands, that if they awoke us we might drive them away or knock them down.

“ When we made a halt to rest by the way, they gathered around us, and played a thousand tricks in our view ; and when we set still, they approached us so near that they gnawed the thongs of our shoes. If we lay down as if intending to sleep, they came and smelt at our noses, to find whether we were dead or alive. On our first arrival, they bit off the noses, fingers, and toes of our dead, while we were preparing the grave ; and thronged in such a manner about the infirm and sick, that it was with difficulty we could keep them off.

“ Every morning we saw these audacious animals patrolling about among the sea-lions and sea-bears, lying on the strand ; smelling at such as were asleep, to discover whether some of them might not be dead ; if that happened to be the case, they proceeded to dissect him immediately, and soon afterwards all were at work in dragging the parts away. Because the sea-lions sometimes in their sleep over-lay their young, the foxes every morning examined the whole herd of them, one by one, as if conscious of this circumstance ; and immediately dragged away the dead cubs from their dams.

“ As they would not suffer us to be at rest either by night or day, we became so exasperated against

them, that we killed them, young and old, and harassed them by every means we could devise. When we awoke in the morning, there always lay two or three that had been knocked on the head the preceding night; and I can safely affirm, that, during my stay upon the island, I killed above two hundred of these animals with my own hands. On the third day after my arrival, I knocked down with a club, within the space of three hours, upwards of seventy of them, and made a covering to my hut with their skins. They were so ravenous, that with one hand we could hold to them a piece of flesh, and with a stick or ax in the other could knock them down.

“ From all the circumstances that occurred during our stay, it was evident that these animals could never before have been acquainted with mankind; and that the dread of man is not innate in brutes, but must be grounded on long experience.

“ Like the common foxes, they were the most sleek and full of hair in the months of October and November. In January and February the growth of this was too thick. In April and May they began to shed their coat; in the two following months they had only wool upon them, and appeared as if they went in waistcoats. In June they dropt their cubs, nine or ten at a brood, in holes and clefts of the rocks. They are so fond of their young, that, to scare us away from them, they barked and yelled like dogs, by which they betrayed their covert; but no sooner did they perceive that their retreat was discovered, than (unless they were prevented) they dragged the young away in their mouths, and endeavoured to conceal them in some more secret place. On one of us killing the young, the dam would follow him with dreadful howlings, both day and



night, for a hundred or more *versts*; and would not even then cease till she had done her enemy some material injury, or was herself killed by him.

In heavy falls of snow, these animals bury themselves in that substance, where they lie as long as it continues of a sufficient depth. They swim across the rivers with great agility. Besides what the sea casts up, or what is destroyed by other beasts, they seize the sea-fowl, by night, on the cliffs, where it has settled to sleep; but, on the contrary, they are themselves frequently victims to the birds of prey. Though now found in such numbers on this island, they were probably conveyed thither from the continent, on the drift-ice; and being afterwards nourished by the great quantity of animal substances thrown ashore by the sea, they became thus enormously multiplied."

We are informed by Mr. Crantz, that the arctic foxes exert an extraordinary degree of cunning in their mode of obtaining fish for prey. They go into the water, and make a splash with their feet, in order to disturb the scaly tribes; and when these come up, immediately seize them. He says that in imitation to these animals, the Greenland women have adopted the same method with success. Charlevoix, apparently alluding to this species, says that they exert an almost incredible degree of cunning in entrapping the different kinds of water-fowl. They advance a little way into the water; and afterwards retire, playing a thousand antic tricks on the banks. The fowl approach; and on their coming near, the fox ceases, that he may not alarm them, only moving about his tail very gently: the former are said to be so foolish as to come up now and peck at it; when he immediately springs round upon them, and seldom misses his aim.

## BRANT FOX.

THIS is less than the common fox, and has a thicker and dusker fur, though sometimes, on the contrary, it is much brighter and redder than that species, as mentioned by Linnæus in his *Fauna Suecica*; the tail is tipped with black.

## CORSAC FOX.

THE colour of this species is in summer, a clear yellow ferruginous; in winter, mixed or shaded with grey, deeper on the back, white on the belly, and reddish on the feet; the eyes are surrounded with a border of white, and a brownish stripe runs from them down the nose; the ears are of the same colour with the back, as is likewise the tail, but the base and tip are blackish; the ears are short; the tail almost as long as the body; the size of this animal is less than that of the common fox. It is an inhabitant of the hilly parts, between Jaik and Irtish; where it resides in its den underground, and commits great ravages among the game. It is hunted by the inhabitants of those regions with falcons and dogs, and it is said that not less than forty or fifty thousand are annually taken. These are sold to the Russians for about forty kopecks (about twenty pence) each; a vast number of their skins are said to be sent into Turkey.

## KARAGAN FOX.

THIS is a small species, which, according to Dr. Pallas, is very common in almost all parts of the Kirghision deserts, and Great Tartary. Its general colour is of a wolf-grey; the head yellowish,

and above the eyes reddish ; the ears are black on the outside, and white within, with the edge and base red ; and near the base is a white spot, from which, along the back to the tail, runs a reddish or yellowish streak ; the throat and breast are of a deep or blackish grey ; the belly white.

#### FULVOUS-NECKED FOX.

THIS fox, according to Mr. Schreber, inhabits North America ; and the skins are often sent over to Europe.

The crown of the head, neck and back, are grey, mixed with black and white ; the finer hairs being white-grey, the coarser varied with black and white, like a porcupine's quill ; the ears are externally yellow-brown towards the tip, mingled with black ; about the ears and on the sides of the neck, there is a fox-yellow patch ; the throat, breast, and belly are white ; the legs externally yellow-brown : on the fore legs, runs from above inwards, a very small black and white mixed stripe, which terminates below in a broader black one ; on the hinder legs a white stripe runs inwards, and underneath joins with a blackish one ; the tail is brown, mixed with a little yellowish. In size this species is inferior to the common fox.

#### BENGAL FOX.

THIS species inhabits Bengal. It is scarcely half the size of the European fox. The face is cinereous ; the body pale brown ; the legs fulvous ; the tail tipped with black ; and down the middle of the face runs a black stripe. The species round the eyes and the middle of the jaws

are white. It is said to feed chiefly on roots and berries.

#### SOOTY FOX.

THIS, in size and habits resembles the arctic fox, but is a distinct species. It is said to be numerous in Iceland, and is mentioned only by Mr. Pennant.

#### ANTARCTIC FOX.

THIS animal is mentioned under the name of wolf-fox in Bougainville's voyages ; it is one third less than the common fox ; has pointed ears lined with white hair ; its head and body are of a cinereous brown ; its hair is more woolly than that of the common fox ; its legs are dashed with a rust colour ; its tail is dusky and tipped with white ; shorter and more bushy than that of the common fox ; it has much the appearance and habit of a wolf in ears, tail, and strength of limbs. Pennant suspects it to be the small Mexican wolf degenerated.

It inhabits the Falkland isles, and is the only quadruped in those distant isles that lives near the shores ; it kennels like a fox, and forms regular paths from bay to bay, probably for the convenience of surprising the water-fowl, on which it lives ; it is at times very meagre, from want of prey. It is very tame, fetid, and barks like a dog.

The Antarctic islands are supposed to have been stocked with these animals by means of islands of ice, broken from the continent and carried by the currents.

## GREY FOX, OR VIRGINIAN FOX.

THIS animal is all of a whitish grey, except a little redness about the ears ; has a sharp nose ; sharp-pointed, long, upright ears ; and long legs, and bushy tail. It inhabits Carolina and the warmer parts of North America. It resembles the common fox in form, but differs from it in the nature of its dwelling ; as it never burrows, but lives in hollow trees ; it gives no diversion to the sportsman ; for, after a mile's chace, it takes to its retreat ; it has no strong smell like the common fox ; it feeds on poultry, birds, &c. and is easily tamed. Their skins, when in season, are made use of for muffs.

## SILVERY FOX.

THESE, resembling in form the common fox, abound in the woody eminences of Louisiana, which are every where pierced with their holes. Their coat is very beautiful ; they have short hair, of a deep brown ; over this spring long silvery hairs, which give the animal a very elegant appearance. They live in forests abounding in game, and never attempt the poultry, which run at large without any danger.

## CEYLONESE DOG.

THIS species is a native of Ceylon, but no particulars relative to its manners or history are known. It was described by Mr. Vosmaer, from a stuffed skin.

He informs us that it was a little larger than a common domestic cat, measuring about twenty-two inches, tapering to the point. The ground co-

lour is a yellowish grey, with a cast of brown on some parts, owing to the longer hairs which are of that colour ; the feet are strongly tinged with a brown cast, which seems to form a kind of stripes or rays ; the belly is cinereous ; the hair on the whole animal is soft to the touch ; the head is long and pointed ; the snout and part under the chin, brown, but the top of the head of a yellowish ash colour, which passing beyond the ears, forms as it were a spot below them, and descends from thence to between the eyes, where it terminates in a point. Between the eyes, on the cheeks, are some oblong patches of a clearer or brighter colour than the rest of the skin ; the nostrils open in the form of crescents ; on each side the front of the nose are seated long hairs or whiskers of a blackish colour ; two similar hairs are also situated at each corner of the eye ; and on each side the head, in a straight line from the nose, is a similar hair like the former ; the ears are small, pointed, and elevated, and of a brown colour. There are six front teeth in the upper mandible, beyond which are two large canine teeth ; and farther back, (so far as the dried state of the specimen permitted a view) four very pointed grinders : but there are probably more, which could not be seen. In the lower jaw are six small front teeth, large canine ones, and six grinders on each side. The claws of this animal resemble those of a cat more than of a dog, though not so long and slight in proportion. Both fore and hind feet have five toes. The animal was received from Ceylon under the name of wild or wood-dog.

#### CAPESCH SHACKAL, OR CAPE JACKAL.

THIS species inhabits the countries about the Cape of Good Hope, and may probably be found

as high as the line ; its length is two feet and three quarters ; its tail one foot, bushy, of a yellow brown ; marked on the upper part with a line of black along it ; and, towards the end, encircled with two rings of black ; it is tipped with white : his ears are erect, of a yellowish brown, mixed with a few scattered black hairs ; his head the same, only having some white hairs intermixed, and growing darker towards the hind part ; his sides are of a light brown, varied with dusky hairs ; his throat, breast, and belly, are white ; on his neck, shoulders, and back, there is a band of black, broad on the shoulders, and growing narrower to the tail. When the hair lies smooth, the part on the neck seems barred with white ; that on the shoulders with white conoid spots, one within the other, with the end pointed to the back, When the hair is ruffled, these marks vanish, or grow less distinct, and a hoariness appears in their stead.

#### SURINAM DOG, FOX, OR JACKAL.

THIS species is of the size of a large cat, has upright ears, little warts on the cheeks, above the eyes, and under the throat ; its tongue is fringed on the sides ; the colour of the upper part of its body is greyish, the lower white ; its tail bends downwards, and is smooth ; it has five toes before, and four behind. It has its name from that part of South America, where it is found. It is described by Linnæus, and no other naturalist.

#### ZERDA, OR FENNEC.

THIS is a singular and beautiful animal, an inhabitant of the vast desert of Saara or Zara, in Africa. It has a very pointed visage, long

whiskers, large, bright, black eyes, very large ears, of a bright rose-colour, lined with long hair, and having their orifice so small as not to be visible, probably covered with a valve or membrane; its legs and feet are like those of a dog: its tail taper, with a black tip.

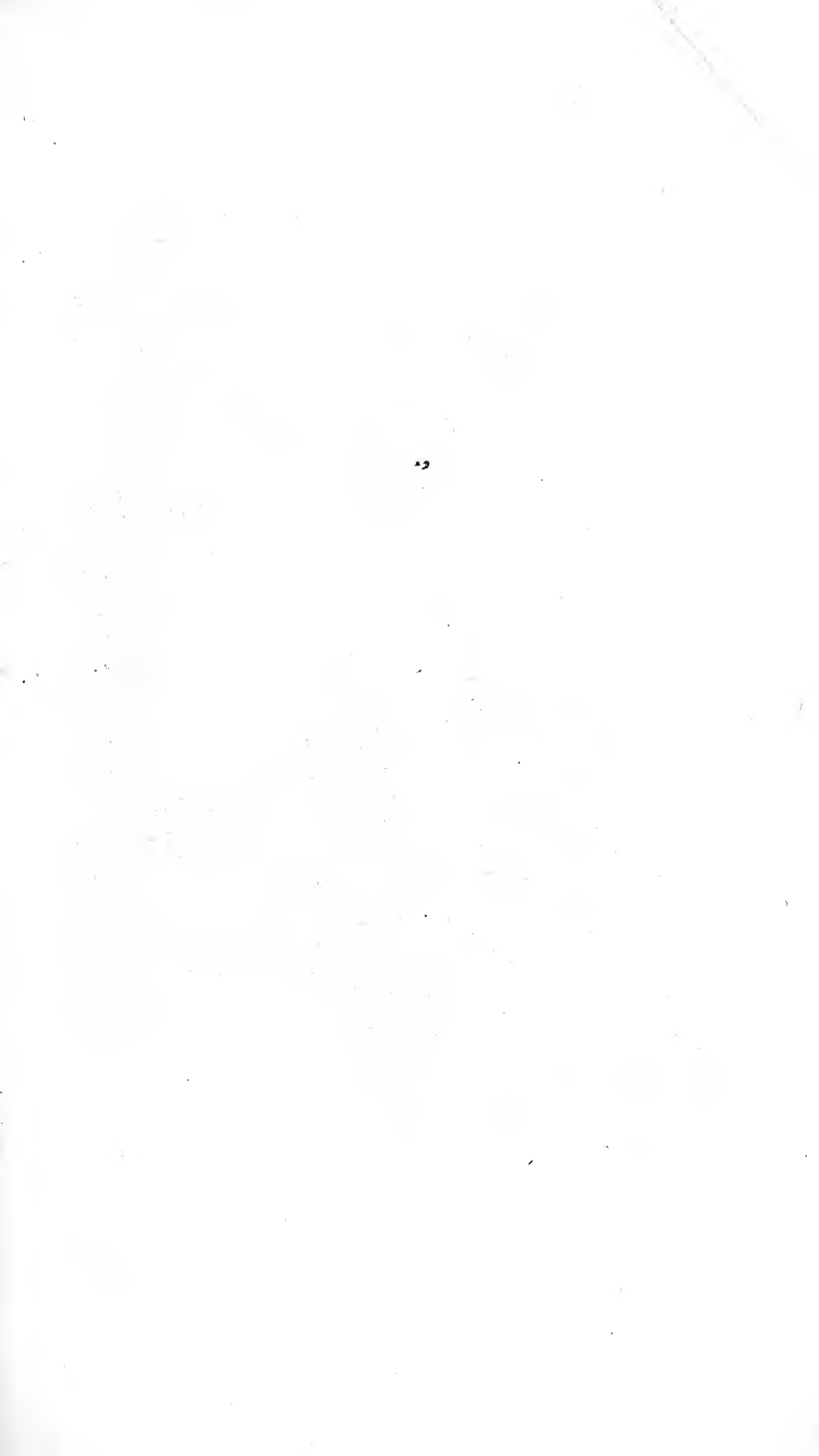
Its colour is between a straw and a pale brown.

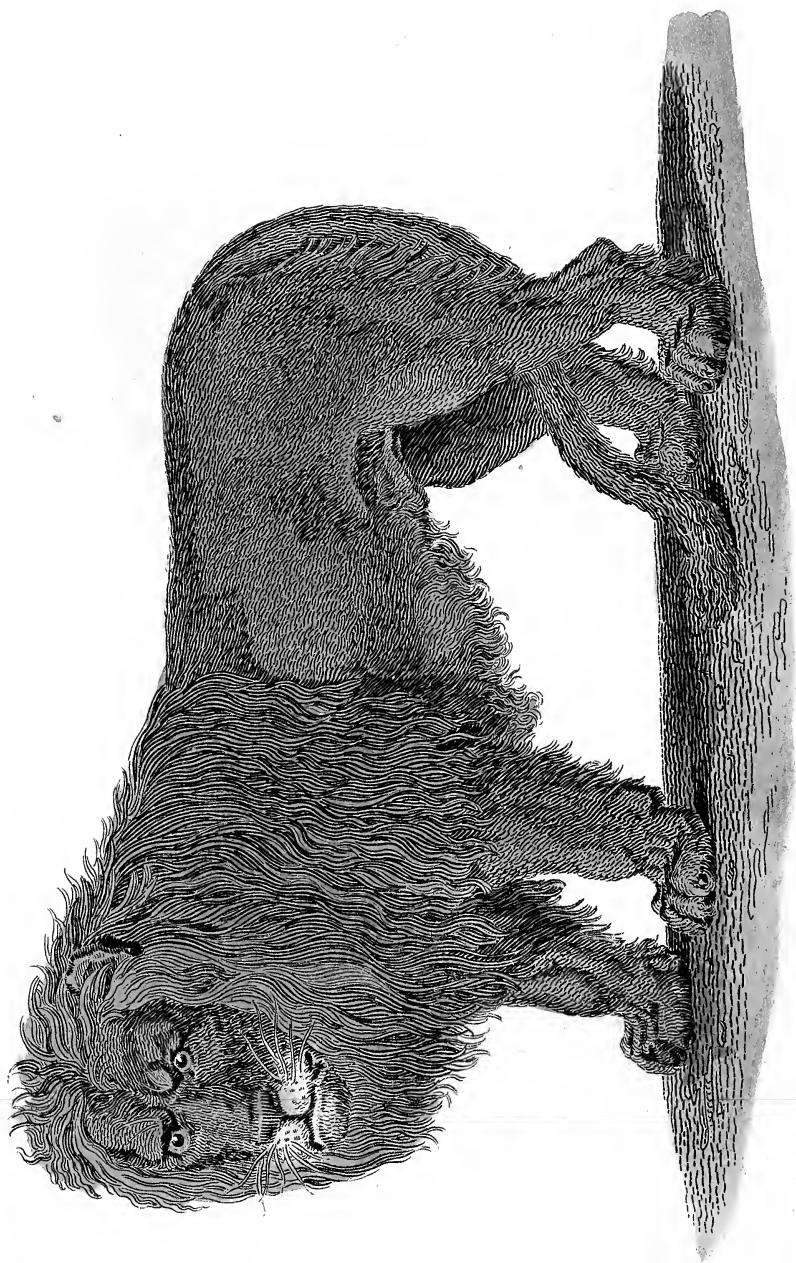
Its length from the nose to the tail, ten inches: its ears three and a half; its tail six; its height not five.

It burrows in the sandy ground; is so excessively swift, that it is very rarely taken alive; feeds on insects, especially locusts; sits on its rump, and is very vigilant. It barks like a dog, but much shriller, and that chiefly in the night: it has never been observed to be sportive. One of them that was in the possession of the late Swedish consul at Algiers, who first introduced it to the knowledge of the naturalists of Europe, fed freely from the hand, and would eat bread or boiled meat.

Mr. Bruce affirms, that their true name is fennec. He kept several of them tame, and has furnished us with the following particulars. His favorite food was dates, or any other sweet fruit; he ate eggs with avidity, but would content himself with bread sweetened with honey or sugar. He watched a hind with his eyes, as if accustomed to such prey. He was very much afraid of a cat. In the day he was sleepy and unwilling to be handled, but active in the night, and desirous to effect his escape.







LION.

## CAT TRIBE.

THIS tribe of animals is ferocious, and tolerably swift of foot. They hunt for their prey chiefly in the night, and seize it by surprize ; lying in wait till it comes within reach, and then springing suddenly forwards upon it at one leap. While their prey is in sight, they frequently move their tail from side to side, keeping at the same time their eyes steadily fixed on the object. They never adopt vegetable food, except from necessity. Most of them are very agile in climbing trees ; and have the remarkable property of alighting on their feet, whenever thrown or falling from a height, by which the danger usually attendant on such accidents is often prevented. The females, producing a considerable number of young at a birth, have eight teats ; four of which are situated on the breast, and the other four on the belly.

All the animals belonging to this tribe have six fore-teeth, the intermediate ones of which are equal. They have also three grinders on each side in both jaws. The tongue is furnished with rough sharp prickles, that point backwards. And the claws are sheathed and retractile : a necessary provision to keep them from being dulled while walking ; for, being their principal weapons, as well of offence as defence, they are both hooked and sharp.

## LION.

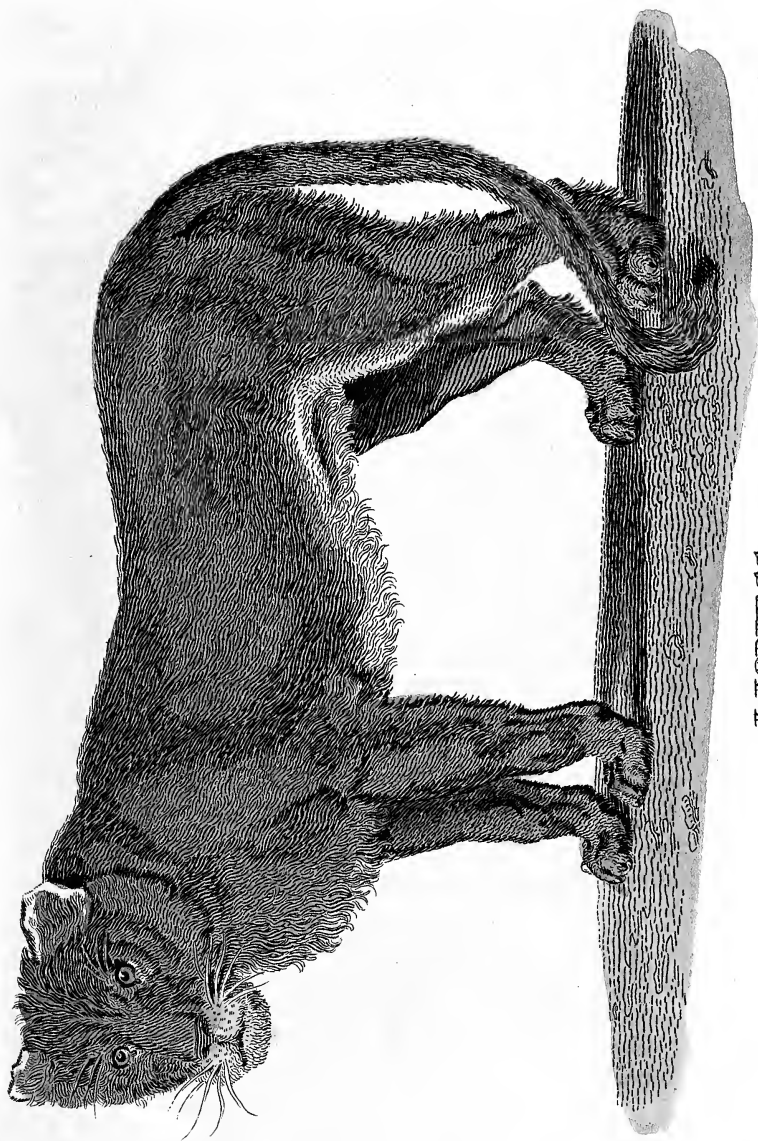
THE lion is chiefly found in the interior of Africa, and in the hotter parts of Asia. His form is strikingly bold and majestic. His large head

and shaggy pendent mane, his strength of limb, and formidable countenance, exhibit a picture of terrific grandeur, which no words can describe.

His length is from six to eight feet; and his tail, which is terminated by a tuft of blackish hair, is alone about four feet. The general colour is a pale tawny, inclining to white beneath. The claws are retractile; not into sheaths, but into the intervals between the toes, by means of a particular articulation of the last joint. The last bone but one, by bending itself outwards, gives place to the last, which is only articulated to it; and to which the claw is fastened so as to bend itself upwards and sideways, more easily than downwards. So that the bone which is at the end of every toe, being almost continually bent upwards, the point which rests upon the ground is not the extremity of the toe, but the node of the articulation of the last two bones; and thus in walking, the claws remain elevated and retracted between the toes; those of the right paws towards the right, and those of the left towards the left side of the toes. This admirable structure is not found in the great-toe; whose last joint bends only downwards, because this toe does not naturally rest upon the ground, being considerably shorter than the others.

The lioness or female is smaller, and wants the mane.

The lion, produced under the burning sun of Africa, is, of all others, the most terrible, the most undaunted. The wolf or the dog, instead of attempting to rival him, scarce deserve to attend his motions, or become his providers. Such, however, of these animals, as are bred in a more temperate climate, or towards the tops of cold and lofty mountains, are far more gentle, or, to speak more properly, far less dangerous than those bred in the torrid valleys beneath. The lions of



LIONESS.



mount Atlas, the tops of which are covered in eternal snows, have neither the strength nor the ferocity of the lions of Biledulgerid or Zaara, where the plains are covered with burning sands. It is particularly in these frightful deserts, that those enormous and terrible beasts are found, that seem to be the scourge and the terror of the neighbouring kingdoms. Happily, indeed, the species is not very numerous; and it seems to be diminishing daily; for those who have travelled through these countries, assure us, that there are by no means so many there at present, as were known formerly; and Mr. Shaw observes, that the Romans carried fifty times as many lions from Lybia, in one year, to combat in their amphitheatres, as are to be found in the whole country at this time. The same remark is made with regard to Turkey, to Persia, and the Indies; where the lions are found to diminish in their numbers every day. Nor is it difficult to assign the cause of this diminution; it is obvious that it cannot be owing to the increase of the force of other quadrupeds, since they are all inferior to the lion, and, consequently, instead of lessening the number, only tend to increase the supplies on which they subsist; it must, therefore, be occasioned by the increase of mankind; for man is the only animal in nature capable of making head against these tyrants of the forest, and preventing their increase. The arms even of a Hottentot, or a negro, make them more than a match for this powerful creature; and they seldom make the attack without coming off victorious. Their usual manner is to find out his retreat, and with spears headed with iron, to provoke him to the combat; four men are considered as sufficient for this encounter; and he against whom the lion flies, receives him upon his spear, while the

others attack him behind ; the lion, finding himself wounded in the rear, turns that way, and thus gives the man he first attacked an opportunity to recover. In this manner they attack him on all sides ; until, at last, they entirely disable, and then dispatch him. This superiority in the numbers, and the arts of man, that are sufficient to conquer the lion, serve also to enervate and discourage him ; for he is brave only in proportion to the success of his former encounters. In the vast deserts of Zaara, in the burning sands that lie between Mauritania and Negroland, in the uninhabited countries that lie to the north of Caffraria, and, in general, in all the deserts of Africa, where man has not fixed his habitation, the lions are found in great numbers, and preserve their natural courage and force. Accustomed to measure their strength with every animal they meet, the habit of conquering renders them intrepid and terrible. Having never experienced the dangerous arts and combinations of man, they have no apprehensions from his power. They boldly face him, and seem to brave the force of his arms. Wounds rather serve to provoke their rage than repress their ardour. They are not daunted even with the opposition of numbers ; a single lion of the desert often attacks an entire caravan ; and after an obstinate combat, when he finds himself overpowered, instead of flying, he continues to combat, retreating, and still facing the enemy till he dies. On the contrary, the lions which inhabit the peopled countries of Morocco or India, having become acquainted with human power, and experienced man's superiority, have lost all their courage, so as to be scared away with a shout ; and seldom attack any but the unresisting flocks or herds, which even women and children are sufficient to protect.



This alteration in the lion's disposition sufficiently shows that he might easily be tamed, and admit of a certain degree of education. In fact, nothing is more common than for the keepers of the wild beasts to play with this animal, to pull out his tongue, and even to chastise him without a cause. He seems to bear it all with the utmost composure ; and we very rarely have instances of his revenging these unprovoked sallies of impertinent cruelty. However, when his anger is at last excited, the consequences are terrible. Labat tells us of a gentleman who kept a lion in his chamber, and employed a servant to attend it ; who, as is usual, mixed his blows with caresses. This ill judged association continued for some time ; till one morning the gentleman was awakened by a noise in his room, which, at first, he could not tell the cause of ; but, drawing the curtains, he perceived a horrid spectacle ; the lion growling over the man's head, which he had separated from the body, and tossing it round the floor. He immediately, therefore, flew into the next room, called to the people without, and had the animal secured from doing further mischief. However, this single account is not sufficient to weigh against the many instances we every day see of this creature's gentleness and submission. He is often bred up with other domestic animals, and is seen to play innocently and familiarly among them ; and, if it ever happens that his natural ferocity returns, it is seldom exerted against his benefactors. As his passions are strong, and his appetites vehement, one ought not to presume that the impressions of education will always prevail ; so that it would be dangerous, in such circumstances, to suffer him to remain too long without food, or to persist in irritating and abusing him : however, numberless accounts

assure us that his anger is noble, his courage magnanimous, and his disposition grateful. He has been often seen to despise contemptible enemies, and pardon their insults, when it was in his power to punish them. He has been seen to spare the lives of such as were thrown to be devoured by him, to live peaceably with them, to afford them a part of his subsistence, and sometimes to want food himself, rather than deprive them of that life which his generosity had spared.

In the reign of king James I. Mr. Henry Archer, a watchmaker in Morocco, had two whelps given him, which had been stolen, not long before, from a lioness near Mount Atlas. They were a male and female ; and till the death of the latter, were kept together in the emperor's garden. He, at that time had the male constantly in his bedroom, till it grew as tall as a large mastiff-dog ; and the animal was perfectly tame and gentle in its manners. Being about to return to England, he reluctantly gave it to a Marseilles merchant ; who presented it to the French king, from whom it came as a present to king James ; and, for seven years afterwards, was kept in the tower. A person of the name of Bull, who had been a servant to Mr. Archer, went by chance, with some friends, to see the animals there. The beast recognized him in a moment ; and by his whining voice and motions, expressive of anxiety for him to come near, fully exhibited the symptoms of his joy at meeting with a former friend. Bull, equally rejoiced, ordered the keeper to open the grate, and he went in. The lion fawned upon him like a dog, licking his feet, hands, and face ; and skipped and tumbled about, to the astonishment of all the spectators. When the man left the place, the animal bellowed aloud, and shook his cage in an extacy of sorrow and rage ; and for

four days afterwards refused to take any nourishment whatever.

About the year 1650, when the plague raged at Naples, sir George Davis, the English consul there, retired to Florence. He happened one day, from curiosity, to visit the grand duke's dens. At the farther end of the place, in one of the dens, lay a lion, which the keepers, during three whole years, had not been able to tame, though all the art and gentleness imaginable had been used. Sir George no sooner appeared at the gates of the den, than the lion ran to him with all the marks of joy and transport he was capable of expressing. He reared himself up and licked his hand, which this gentleman put in through the iron grate. The keeper, affrighted, pulled him away by the arm, intreating him not to hazard his life by venturing so near the fiercest creature of his kind that had ever entered those dens. Nothing, however, would satisfy sir George, but in spite of all the keeper said to him, he would go into the den. The instant he entered, the lion threw his paws upon his shoulders, licked his face, and ran about his den, fawning, and as full of joy as a dog at the sight of his master. After several salutations had been exchanged, they parted very good friends.

The rumour of this interview between the lion and the stranger, ran immediately through the city, and sir George almost passed for a saint among the people. The grand duke, as soon as he had heard of it, sent for sir George; who going with his highness to the den, gave him the following account of what had seemed so strange.

"A captain of a ship from Barbary gave me this lion, when quite a whelp. I brought him up tame; but when I thought him too large to be suffered to run about the house, I built a den for

him in my court yard ; from that time he was never permitted to be loose, except when brought into the house to be exhibited to my friends. When he was five years old, he did some mischief by pawing and playing with people in his frolicksome moods ; having griped a man one day a little too hard, I ordered him to be shot, for fear of incurring the guilt of what might happen ; on this, a friend, who happened to be then at dinner with me, begged him as a present :—how he came here I know not.”

Here sir George ended ; and the duke of Tuscany assured him that the lion had been given to him by the very person on whom sir George had bestowed him.

An instance of recollection and attachment occurred not many years since in a lion belonging to the dutchess of Hamilton. It is thus related by Mr. Hope :

“ One day I had the honour of dining with the dutchess of Hamilton. After dinner, the company attended her grace to see a lion fed that she had in the court. While we were admiring his fierceness, and teasing him with sticks to make him abandon his prey and fly at us, the porter came and informed the dutchess, that a serjeant with some recruits at the gate begged to see the lion. Her grace, with great condescension and good nature, asked permission of the company to admit the travellers. They were accordingly admitted at the moment the lion was growling over his prey. The serjeant, advancing to the cage, called ‘ Nero, Nero, poor Nero, don’t you know me ? ’ The animal instantly turned his head to look at him ; then rose up, left his prey, and came, wagging his tail, to the side of the cage. The man put his hand upon him, and patted him ; telling us, at the same time, that it was three years

since they had seen each other ; and that the care of the lion on his passage from Gibraltar, had been committed to him, and he was happy to see the poor beast shew so much gratitude for his attention. The lion, indeed, seemed perfectly pleased ; he went to and fro, rubbing himself against the place where his benefactor stood, and licked the serjeant's hand as he held it out to him. The man wanted to go into the cage to him ; but was withheld by the company, who were not altogether convinced that it would be safe for him to do so."

Citoyen Felix, a few years ago, brought two lions, a male and female, to the national ménagerie at Paris. About the beginning of the following June, Felix was taken ill, and could no longer attend the lions ; another was, therefore, forced to perform this duty. The male, sad and solitary, remained from that moment constantly seated at the end of his cage, and refused to receive any thing from the stranger, whose presence was hateful to him, and whom he often menaced by bellowing. The company even of the female seemed now to displease him ; and he paid no attention to her. The uneasiness of the animal afforded a belief that he was really ill, but no one dared to approach him. At length, Felix recovered ; and, with intention to surprize the lion, he crawled softly to the cage, and shewed only his face between the bars ; the lion, in a moment made a bound, leaped against the bars, patted him with its paws, licked his hands and face, and trembled with pleasure. The female also ran to him ; but the lion drove her back, and seemed angry ; and, fearful that she should snatch any favours from Felix, a quarrel was about to take place, but Felix entered the cage to pacify them. He caressed them by turns ; and was afterwards fre-

quently seen between them. He had so great a command over them, that whenever he wished them to separate and retire to their cages, he had only to give the order ; when he had a desire that they should lie down, and shew strangers their paws or throats, on the least sign they would lie on their backs, hold up their paws one after another, open their throats, and as a recompence, obtain the favour of licking his hand. These animals were of a strong breed ; and at the time above-mentioned, were five years and a half old.

It is usually supposed that the lion is not possessed of the sense of smelling in such perfection as most other animals. It is also observed, that too strong a light greatly incommodates him. This is more than probable from the formation of his eyes, which, like those of the cat, seem fitted for seeing best in the dark. For this reason, he seldom appears in open day, but ravages chiefly by night ; and not only the lion, but all other animals of the cat kind, are kept off by the fires which the inhabitants light to preserve their herds and flocks ; the brightness of the flame dazzles their eyes, which are only fitted for seeing in the dark ; and they are afraid to venture blindly into those places which they know to be filled with their enemies.

It is equally true of all this kind, that they hunt rather by the sight than the smell ; and it sometimes happens that the lion pursues either the jackal or the wild-dog, while they are hunting upon the scent ; and, when they have run the beast down, he comes in and monopolizes the spoil. From hence, probably, may have arisen the story of the lion's provider ; these little industrious animals may often, it is true, provide a feast for the lion ; but they have hunted

merely for themselves, and he is an unwelcome intruder upon the fruits of their toil.

The lion, when hungry, boldly attacks all animals that come in his way ; but, as he is very formidable, as they all seek to avoid him, he is often obliged to hide, in order to take them by surprise. For this purpose he crouches on his belly, in some thicket, or among the long grass, which is found in many parts of the forest ; in this retreat he continues, with patient expectation, until his prey comes within a proper distance, and he then springs after it, fifteen or twenty feet from him, and often seizes it at the first bound. If he misses the effort, and in two or three reiterated springs cannot seize his prey, he continues motionless for a time, seems to be very sensible of his disappointment, and waits for a more successful opportunity. In the deserts and forests, his most usual prey are the gazelles and the monkeys, with which the torrid regions abound. The latter he takes when they happen to be upon the ground, for he cannot climb trees like the cat or the tiger. He devours a great deal at a time, and generally fills himself for two or three days to come. His teeth are so strong that he very easily breaks the bones, and swallows them with the rest of the body. It is reported that he sustains hunger a very long time, but thirst he cannot support in an equal degree, his temperament being extremely hot ; some have even asserted that he is in a continual fever. He drinks as often as he meets with water, lapping it like a cat : which, as we know, drinks but slowly. He generally requires about fifteen pounds of raw flesh in a day ; he prefers that of live animals, and particularly those which he has just killed. He seldom devours the bodies of animals when they begin to putrefy ; and he chooses rather to hunt for a fresh spoil, than to

return to that which he had half devoured before. However, though he usually feeds upon fresh provision, his breath is very offensive, and his urine insupportable.

The roaring of the lion is so loud, that when it is heard in the night, and re-echoed by the mountains, it resembles distant thunder. This roar is his natural note; for when enraged he has a different growl, which is short, broken, and reiterated. The roar is a deep hollow growl, which he sends forth five or six times a day, particularly before rains. The cry of anger is much louder and more formidable. This is always excited by opposition; and upon these occasions, when the lion summons up all his terrors for the combat, nothing can be more terrible. He then lashes his sides with his long tail, which alone is strong enough to lay a man level. He moves his mane in every direction; it seems to rise and stand like bristles round his head; the skin and muscles of his face are all in agitation; his huge eye-brows half cover his glaring eyeballs: he discovers his teeth, which are formed rather for destruction than chewing his food; he shows his tongue covered with points, and extends his claws, which appear almost as long as a man's fingers. Prepared in this manner for war, there are but few animals that will venture to engage him; and even the boldest of the human kind are daunted at his approach. The elephant, the rhinoceros, the tiger, and the hippopotamus, are the only animals that are not afraid singly to make opposition.

Nevertheless, neither the leopard nor the wild boar, if provoked, will shun the combat; they do not seek the lion to attack, but will not fly at his approach: they wait his onset, which he seldom makes, unless compelled by hunger;



they then exert all their strength, and are sometimes successful. We are told of the combat of a lion and a wild boar, in a meadow near Algiers, which continued for a long time with incredible obstinacy. At last, both were seen to fall by the wounds they had given each other; and the ground all about them was covered with their blood. These instances, however, are very rare, for the lion is in general the undisputed master of the forest. Man is the only creature that attacks him with almost certain success; with the assistance of dogs and horses, which are trained to the pursuit. These animals that, in a state of nature, would have fled from the presence of the lion, in an agony of consternation, when conscious of the assistance of man, become pursuers in their turn, and boldly hunt their natural tyrant. The dogs are always of the large breed; and the horses themselves, as Gesner assures us, must be of that sort called *charossi*, or lion-eyed, all others of this kind flying at the sight of a lion, and endeavouring to throw their riders. When the lion is roused, he recedes with a slow, proud motion; he never goes off directly forward, nor measures his paces equally, but takes an oblique course, going from one side to the other, and bounding rather than running. When the hunters approach him, they either shoot or throw their javelins; and in this manner disable him before he is attacked by the dogs, many of whom he would otherwise destroy. He is very vivacious, and is never killed at once, but continues to fight desperately even after he has received his mortal blow. He is also taken by pit-falls; the natives digging a deep hole in the ground, and covering it slightly over with sticks and earth; which, however, give way beneath his weight, and he sinks to the bottom, from whence he has no means

of escape. But the most usual manner of taking this animal is while a cub, and incapable of resistance. The place near the den of the lioness is generally well known by the greatness of her depredations on that occasion; the natives, therefore, watch the time of her absence, and, aided by a swift horse, carry off her cubs; which they sell to strangers, or to the great men of their country.

The lion, while young and active, lives by hunting in the forest at the greatest distance from any human habitation; and seldom quits this retreat while able to subsist by his natural industry; but when he becomes old and unfit for the purposes of surprise, he boldly comes down into places more frequented, attacks the flocks and herds that take shelter near the habitation of the shepherd or the husbandman, and depends rather upon his courage than his address for support. It is remarkable, however, that when he makes one of these desperate sallies, if he finds men and quadrupeds in the same field, he only attacks the latter, and never meddles with men, unless they provoke him to engage. It is observed that he prefers the flesh of camels to any other food; he is likewise said to be fond of that of young elephants; these he often attacks before their trunk is yet grown; and, unless the old elephant comes to their assistance, he makes them an easy prey.

The lion is terrible upon all occasions, but particularly at those seasons when he is incited by desire, or when the female has brought forth. It is then that the lioness is seen followed by eight or ten males, who fight most bloody battles among each other, till one of them becomes victorious over all the rest. She is said to bring forth in spring, and to produce but once a year. With respect to the time of gestation, naturalists

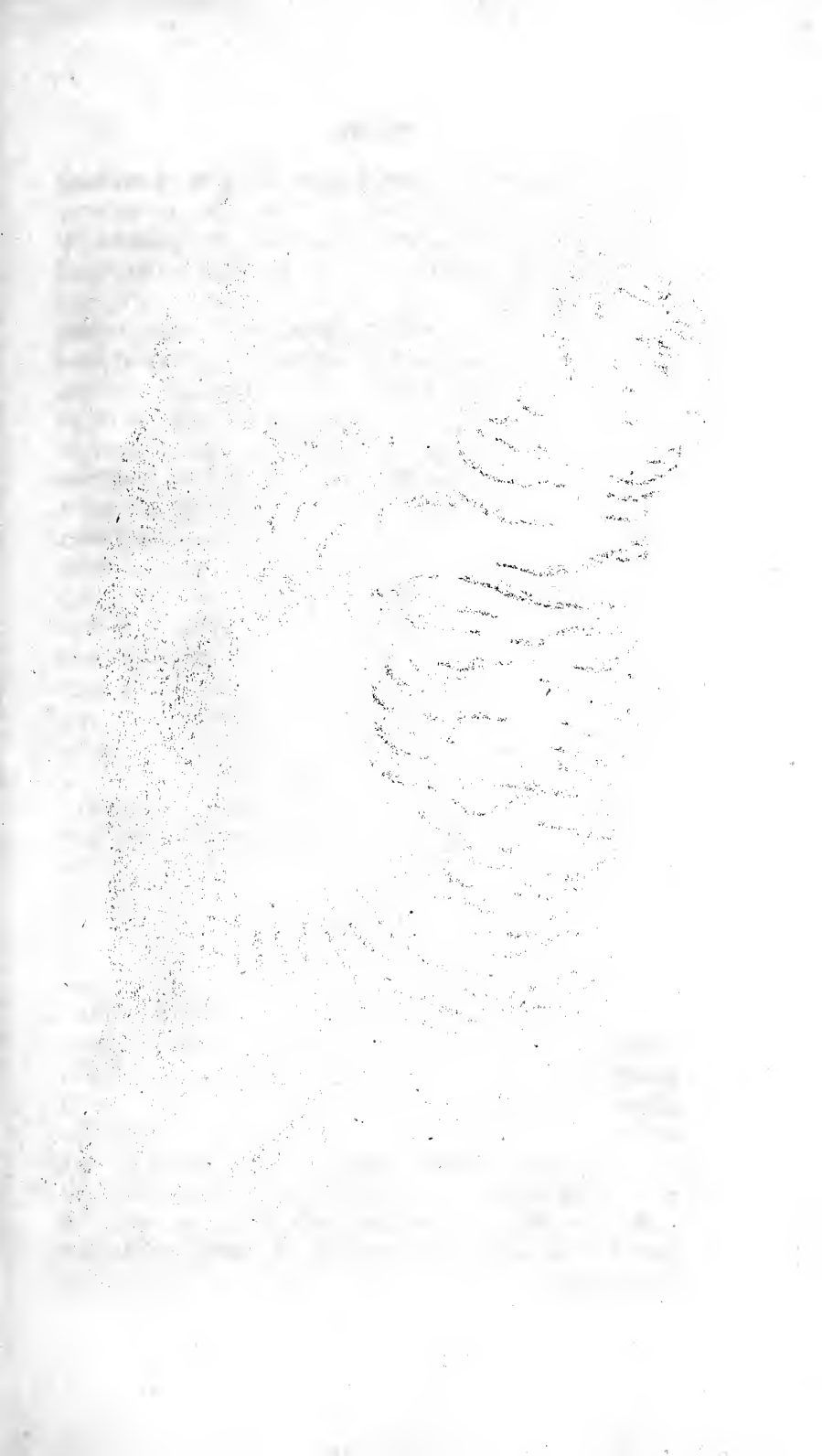
have been divided ; some asserting that the lioness went with young six months, and others but two. The time also of their growth and their age have hitherto been left in obscurity ; some asserting that they acquired their full growth in three years, and others, that they required a longer period to come to perfection ; some saying, (and among this number is M. Buffon) that they lived to but twenty or twenty-two years at most ; others making their lives even of shorter duration. All these doubts are now reduced to a certainty ; for we have had several of these animals bred in the tower ; so that the manner of their copulation, the time of their gestation, the number they bring forth, and the time they take to come to perfection, are all pretty well known. Although the lion emits his urine backwards, yet he couples in the ordinary manner ; and, as was said before, his internal structure in almost every respect resembles that of a cat. The lioness, however, is upon these occasions particularly fierce, and often wounds the lion in a terrible manner. She goes with young no more than five months ; the young ones, which are never more than two in number, when brought forth, are about the size of a large pug-dog, harmless, pretty, and playful ; they continue the teat for twelve months, and the animal is more than five years in coming to perfection. As to its age, from its imprisoned state, we can have no certainty ; since it is very probable that, being deprived of its natural climate, food, and exercise, its life must be very much abridged. However, naturalists have hitherto been greatly mistaken as to the length of its existence. The great lion called Pompey, which died in the year 1760, was known to have been in the tower for above seventy years ; and one lately died

there, which was brought from the river Gambia, that was above sixty-three. The lion, therefore, is a very long-lived animal ; and, very probably, in his native forests, his age exceeds even that of man himself.

In this animal, all the passions, even of the most gentle kind, are in excess ; but particularly the attachment of the female to her young. The lioness, though naturally less strong, less courageous, and less mischievous than the lion, becomes terrible when she has got young ones to provide for. She then makes her incursions with even more intrepidity than the lion himself ; she throws herself indiscriminately among men and other animals ; destroys without distinction ; loads herself with the spoil, and brings it home reeking to her cubs, whom she accustoms sometimes to cruelty and blood. She usually brings forth in the most retired and inaccessible places ; and, when she fears to have her retreat discovered, often hides her track by running back her ground, or by brushing it out with her tail. When attacked, she will defend her young to the last extremity.

#### TIGER.

The ancients had a saying, "That as the peacock is the most beautiful among birds, so is the tiger among quadrupeds." In fact, no quadruped can be more beautiful than this animal ; the glossy smoothness of his hair, which lies much smoother, and shines with greater brightness than even that of the leopard ; the extreme blackness of the streaks with which he is marked, and the bright orange yellow colour of the ground which they diversify, at once strike the beholder.





TIGER.

The beauty of the tiger can only be conceived by those who have seen him at large in his native forests ; for its lustre is greatly diminished, both in the specimens and live animals which arrive in this country.

To this beauty of colouring is added an extremely elegant form, much larger, indeed, than that of the leopard, but more slender, more delicate, and bespeaking the most extreme swiftness and agility. Unhappily, however, this animal's disposition is as mischievous as its form is admirable, as if Providence was willing to show the small value of beauty, by bestowing it on the most noxious of quadrupeds.

The chief and most observable distinction in the tiger, and in which it differs from all others of the mottled kind, is in the shape of its colours, which run in streaks or bands in the same direction as his ribs, from the back down to the belly. The leopard, the panther, and the ounce, are all partly covered like this animal, but with this difference, that their colours are broken in spots all over the body ; whereas, in the tiger they stretch lengthwise, and there is scarce a round spot to be found on his skin. Besides this, there are other observable distinctions : the tiger is much larger, and often found bigger than even the lion himself ; it is much slenderer also in proportion to its size ; its legs shorter, and its neck and body longer. In short, of all other animals, it most resembles the cat in shape ; and, if we conceive the latter magnified to a very great degree, we shall have a tolerable idea of the former.

“The tiger,” says M. Buffon “seems to partake of all the noxious qualities of the lion, without sharing any of his good ones.” To pride, courage, and strength, the lion joins greatness, clemency, and generosity ; but the tiger

is fierce without provocation, and cruel without necessity. The lion seldom ravages, except when excited by hunger; the tiger, on the contrary, though glutted with slaughter, is not satisfied, still continues the carnage, and seems to have its courage only inflamed by not finding resistance. In falling in among a flock or a herd, it gives no quarter, but levels all with indiscriminate cruelty, and scarce finds time to appease its appetite, while intent upon satisfying the malignity of its nature. It thus becomes the scourge of the country where it is found; it fears neither the threats nor the opposition of mankind; the beasts, both wild and tame, fall equally a sacrifice to its insatiable fury; the young elephant and the rhinoceros become equally its prey, and it not unfrequently ventures to attack even the lion himself.

“ Happily for the rest of nature, that this animal is not common, and that the species is chiefly confined to the warmest provinces of the East. The tiger is found in Malabar, in Siam, in Bengal, and in all the countries which are inhabited by the elephant or the rhinoceros. Some even pretend that it has a friendship for, and often accompanies the latter, in order to devour its excrements, which serve it as a purge. Be this as it will, there is no doubt but that they are often seen together at the sides of lakes and rivers; where they are probably both compelled to go by the thirst which, in that torrid climate, they must very often endure. It is likely enough also that they seldom make war upon each other, the rhinoceros being a peaceable animal, and the tiger knowing its strength too well to venture the engagement. It is still more likely that the tiger finds this a very convenient situation, since it can there surprize a greater number of animals, which are



compelled thither from the same motives. In fact, it is generally known to lurk near such places where it has an opportunity of choosing its prey, or rather of multiplying its massacres. When it has killed one, it often goes to destroy others, swallowing their blood down at large draughts, and seeming rather glutted than satiated with its abundance."

However, when it has killed a large animal, such as a horse or a buffalo, it immediately begins to devour it on the spot, fearing to be disturbed. In order to feast at its ease, it carries off its prey to the forest, dragging it along with such ease, that the swiftness of its motion seems scarce retarded by the enormous load it sustains. From this alone, we may judge of its strength; but to have a more just idea of this particular, let us stop a moment to consider the dimensions of this most formidable creature. Some travellers have compared it for size to a horse, and others to a buffalo, while others have contented themselves with saying, that it is much larger than a lion.

To give a still more complete idea of the strength of this terrible creature, we shall quote a passage from Father Tachard, who was an eye witness of a combat between a tiger and three elephants at Siam. For this purpose, the king ordered a lofty pallisade to be built of bamboo cane, about a hundred feet square; and in the midst of this were three elephants appointed for combating the tiger. Their heads, and a part of their trunk was covered with a kind of armour, like a mask, which defended that part from the assaults of the fierce animal with which they were to engage. "As soon," says this author, "as we were arrived at the place, a tiger was brought forth from its den of a size much larger than we had ever seen before. It was not at first let

loose, but held with cords, so that one of the elephants approaching, gave it three or four terrible blows, with its trunk on the back, with such force, that the tiger was for some time stunned, and lay without motion, as if it had been dead. However, as soon as it was let loose, and at full liberty, although the first blows had greatly abated its fury, it made at the elephant with a loud shriek, and aimed at seizing his trunk. But the elephant, wrinkling it up with great dexterity, received the tiger on his great teeth, and tossed it up into the air. This so discouraged the furious animal, that it no more ventured to approach the elephant, but made several circuits round the palisade, often attempting to fly at the spectators. Shortly after, the three elephants were sent against it, and they continued to strike it so terribly with their trunks, that it once more lay for dead ; and they would certainly have killed it, had not there been a stop put to the combat."

From this account, we may readily judge of the strength of this animal, which, although reduced to captivity, and held by cords ; though first disabled, and set alone, against three, yet ventured to continue the engagement, and even that against animals covered and protected from its fury.

Captain Hamilton informs us, that in the Sundah Rajah's dominions there are three sorts of tigers in the woods, and that the smallest are the fiercest. This is not above two feet high, appears to be extremely cunning, and delights in human flesh. The second kind is about three feet high, and hunts deer and wild hogs. The tiger of the largest sort is above three feet and a half high ; but, although endowed with greater powers, is, by no means, so rapacious as either of the former. This formidable animal, which is called the royal tiger, (one of which we have at present in the tow-

or) does not seem so ravenous nor so dangerous, and is even more cowardly.

A peasant in that country, as this traveller informs us, had a buffalo fallen into a quagmire, and while he went for assistance, there came a large tiger, that with its single strength drew forth the animal, which the united force of many men could not effect. When the people returned to the place, the first object they beheld was the tiger, who had thrown the buffalo over its shoulder, as a fox does a goose, and was carrying it away, with the feet upward, towards its den; however, as soon as it saw the men, it let fall its prey, and instantly fled to the woods: but it had previously killed the buffalo, and sucked its blood; and, no doubt, the people were very well satisfied with its retreat.—It may be observed, that some East Indian buffaloes weigh above a thousand pounds, which is twice as heavy as the ordinary run of our black cattle; so that from hence we may form a conception of the enormous strength of this rapacious animal, that could thus run off with a weight at least twice as great as that of itself.

We are informed that the tiger will encounter the crocodile. It is said that when he descends to the water to drink, the crocodile raises his head above the surface, in order to seize him, as it does other animals that come there for that purpose. When this is the case, the tiger strikes his claws into the eyes of the crocodile, the only vulnerable part within his reach; and the latter, immediately plunging under the water, drags in the tiger also, and by this means they are frequently both drowned.

The tiger, if taken young, may, for a short time at least, till his ferocity comes with his age, be in some measure domesticated, and rendered mild and playful to his keepers. A beautiful young tiger, brought not long ago from China, in the Pitt East

Indiaman, at the age of ten months, was so far domesticated, as to admit of every kind of familiarity from the people on board. It seemed to be quite harmless, and was as playful as a kitten. It frequently slept with the sailors in their hammocks ; and would suffer two or three of them to repose their heads on its back, as upon a pillow, while it lay stretched out upon the deck. In return for this, it would, however, now and then steal their meat. Having one day stolen a piece of beef from the carpenter, he followed the animal, took the meat out of its mouth, and beat it severely for the theft ; which punishment it suffered with all the patience of a dog. It would frequently run out on the boltsprit ; climb about the ship like a cat ; and perform a number of other tricks ; with an agility that was truly astonishing. There was a dog on board, with which it would often play in the most diverting manner. This animal was taken on board the ship when it was only a month or six weeks old, and arrived in this country before it had quite completed a year.

Mr. Bingley informs us of the following particulars of his conduct since he arrived in the tower.

He has in no instance been guilty of any ill-natured or mischievous tricks. He is called Harry, and to that name answers all the commands of his keeper.

In the year 1801, one day after the tiger had been fed, his keeper put into the den to him a small rough, black, terrier puppy, a female. The beast suffered it to remain uninjured, and soon afterwards became so much attached to it, as to be very restless and unhappy whenever the animal was taken away to be fed. On its return, the tiger invariably expressed the greatest symptoms of pleasure and delight, always welcoming its arrival by gently licking over every part of its body. In one or two

instances, the terrier was left in the den by mistake, during the time the tiger had his food. The dog sometimes ventured to eat along with him, but seldom without his appearing dissatisfied with the liberty. This terrier, after a residence with the tiger of several months, was removed to make way for a little female Dutch mastiff. It was thought advisable, before the terrier was taken away, to shut up the little mastiff for three or four days among the straw of the tiger's bed, to take off, if possible, any smell that might be offensive to the animal. The exchange was made soon after the animals had been fed ; the tiger seemed perfectly contented with his new companion, and immediately began to lick it as he had before done the terrier. It seemed at first in considerable alarm with so formidable an inmate, but in the course of the day became perfectly reconciled to its situation. This diminutive creature he would suffer to play with him with the greatest good-nature. I have myself seen it bark at him and bite him by the foot and mouth without his expressing the least displeasure. When the dog, in its frolic, seized his foot, he merely lifted it up out of its mouth, and seemed otherwise heedless of its attacks. During the time she was in the habit of daily visiting the tiger, she happened to be with young, and at the time of parturition was necessarily absent from him two or three whole days. The tiger in this absence was extremely agitated and uneasy, as he was afterwards, whenever she happened to be detained from him a greater while than usual in feeding her young ones. She died about five weeks after this time, supposed to have been trodden upon by some person who came to see the animals ; and many days elapsed before the tiger became reconciled to her absence.

Strange dogs have several times been put into

the tiger's den after his feeding, and he has in no instance attempted to injure them. Mr. E. Cross, the late keeper, informs me that the animal's docility is such, that he thinks he could himself with safety venture into the den. The ship carpenter, who came over with the tiger, after an absence of more than two years, came to the tower to see him. The animal instantly recognized a former acquaintance, rubbed himself backward and forward against the grating of his den, and appeared highly delighted. Notwithstanding the urgent request that he would not expose himself to the danger, the man begged to be let into the den with so much entreaty, that he was at last suffered to enter. The emotions of the animal seemed roused in the most grateful manner. He rubbed against him, licked his hands, fawned upon him like a cat, and in no respect attempted to injure him. The man remained here for two or three hours ; and he at last began to fancy there would be some difficulty in getting out alone. Such was the affection of the animal towards his former friend, and so close did he keep to his person, as to render his escape by no means so easy as he had expected. With some care, however, he got the tiger beyond the partition of the two dens, and the keeper watching his opportunity, closed the slide, and separated them.

D'Obsonville seems of opinion that the tiger may be in some measure educated ; but that the Eastern nations deem it useless to make subservient to their amusement an animal, whose strength is the more dangerous from its natural gloomy ferocity, which, roused by certain circumstances, might be found to have been by no means eradicated.

The method of the tiger's seizing his prey, is by concealing himself from view, and springing, with a horrible roar, on his object, which he car-

ries off into the recesses of the forest ; having first, if undisturbed, sucked out the blood. His cry, in the act of springing on the victim, is said to be hideous beyond conception ; and we are told, that, like the lion, if he misses his object, he makes off without repeating the attempt. He seems to prefer mankind to any other prey, when he can procure them by surprize ; but he seldom makes an open attack on any animal capable of resistance.

In the beginning of the present century, a company, seated under the shade of some trees near the banks of a river in Bengal, were alarmed by the unexpected sight of a tiger, preparing for its fatal spring ; when a lady, with almost unexampled presence of mind, unfurled a large umbrella in the animal's face ; which, being confounded by so extraordinary and sudden an appearance, instantly retired, and thus gave them an opportunity of escaping from its terrible attack.

Another party had not the same good fortune ; but, in the height of their entertainment, in an instant, one of their companions was seized and carried off by a tiger. But the fatal accident, which a few years ago occurred in the East Indies, must be still fresh in the memory of all who have read the dreadful description given by an eye-witness of the scene.

“ We went,” says the narrator, “ on shore on Sangar island, to shoot deer ; of which we saw innumerable tracks, as well as of tigers ; we continued our diversion till near three o'clock ; when, sitting down by the side of a jungle to refresh ourselves, a roar like thunder was heard, and an immense tiger seized our unfortunate friend, and rushed again into the jungle, dragging him through the thickest bushes and trees, every thing giving way to its monstrous strength ; a tigress

accompanied his progress. The united agonies of horror, regret, and fear, rushed at once upon us. I fired on the tiger ; he seemed agitated. My companion fired also ; and in a few moments after this, our unfortunate friend came up to us, bathed in blood. Every medical assistance was vain ; and he expired in the space of twenty-four hours, having received such deep wounds from the teeth and claws of the animal, as rendered his recovery hopeless. A large fire, consisting of ten or twelve whole trees, was blazing near us at the time this accident took place, and ten or more of the natives were with us. The human mind can scarcely form any idea of this scene of horror ! We had but just pushed our boat from this accursed shore, when the tigress made her appearance, almost raging mad, and remained on the sand all the while we continued in sight."

On the borders of Tartary, Tigers are very frequent ; and in so populous an empire as China, where it would seem impossible for them to have remained till the present day unextirpated. In the Northern roads, hundreds of travellers are seen with lanterns carried before them, to secure them from these ravenous animals. In some parts of India, they are particularly fatal to wood-cutters and labourers about the forests ; and they have been known to swim to boats at anchor at a little distance from the shore, and snatch the men from aboard. In Java, they are much dreaded, from their very frequently carrying off the travelling inhabitants. When any person of consequence goes out into the country, he has with him men, who blow incessantly a kind of small French-horns, the shrill sound of which frightens these creatures entirely away. The hunting of tigers is a favourite amusement with some of the Eastern princes ; who go in search of them, attended by



considerable bodies of men, well mounted and armed with lances. As soon as the animals are roused, they are instantly attacked on all sides, with pikes, arrows, and sabres, and are presently destroyed. This diversion is, however, always attended with danger : for if the tiger feels himself wounded, he seldom retreats without sacrificing one of the party to his vengeance. There are men who, covered with a coat of mail, or even armed only with a shield, a poniard, and a short scimitar, will dare to attack these blood-thirsty animals singly, and fight with them life for life : for in combats of this nature there is no other alternative, than to vanquish or to fall.

The inhabitants of these countries predict their success or losses by omens taken from this animal. If they are marching against an enemy, and a tiger is seen flying nearly in the same direction, victory is always supposed to be certain. But as it must of course happen that the reverse frequently takes place, they are never in want of a subterfuge to justify a similar augury.

The tigress, like the lioness, produces four or five young at a litter. She is at all times furious ; but her rage rises to the utmost extremity, when robbed of her young. She then braves every danger ; and pursues her plunderers, who are often obliged to release one of their captives in order to retard her motion. She stops, takes it up, and carries it to the nearest covert ; but instantly returns and renews her pursuit even to the gates of buildings, or the edge of the sea ; and when her hope of recovering her offspring is lost, she expresses her agony by howlings, so hideous as to excite terror wherever they are heard.

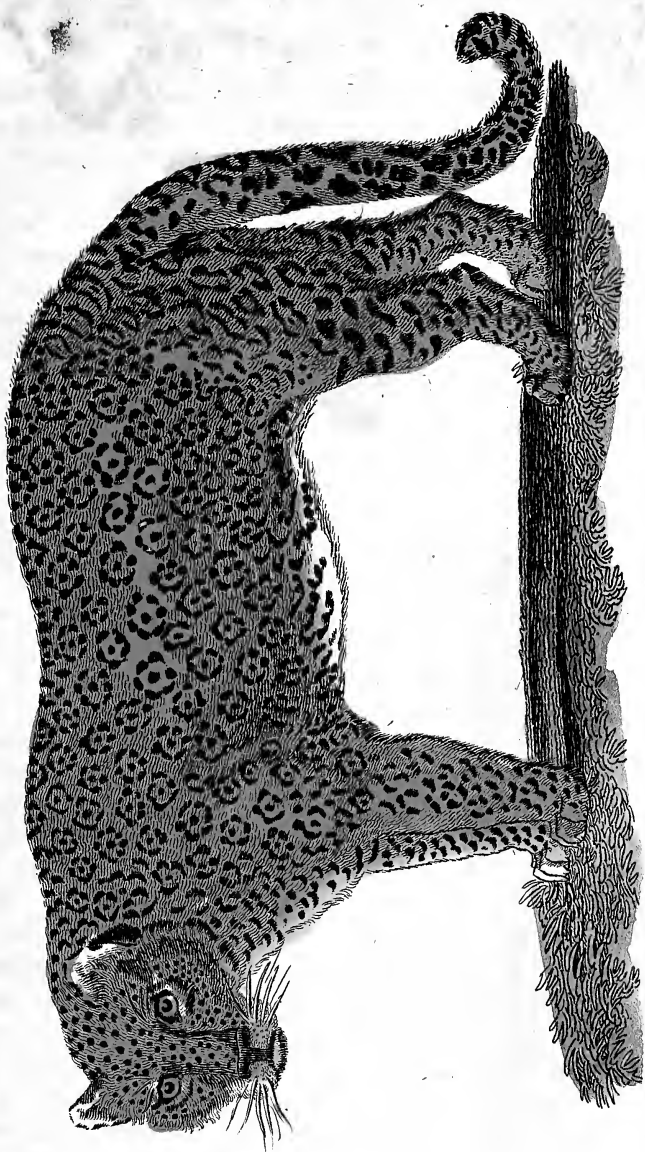
The roar of the tiger is said to be exceedingly dreadful. It begins by intonations and inflections, deep, melancholy, and slow ; presently it becomes

more acute ; when suddenly exerting himself, the animal utters a violent cry, interrupted by long tremulous sounds, which, together, make a distracting impression upon the mind. It is chiefly in the night that this is heard ; when silence and darkness add to the horror, and his roarings are repeated by the echoes of the mountains.

The skin of these animals is much esteemed all over the East, particularly in China ; the mandarines cover their seats of justice in the public places with it, and convert it into coverings for cushions in winter. In Europe, these skins, though but seldom to be met with, are of no great value ; those of the panther and the leopard being held in much greater estimation. This is all the little benefit we derive from this dreadful animal, of which so many falsehoods have been reported ; as, that its sweat was poisonous, and the hair of its whiskers more dangerous than an envenomed arrow. But the real mischiefs which the tiger occasions while living are sufficient, without giving imaginary ones to the parts of its body when dead. In fact, the Indians sometimes eat its flesh, and find it neither disagreeable nor unwholesome.

#### PANTHER.

THIS animal measures, from the point of the nose to the tail, six feet and a half or seven feet, and its tail near three feet. Its limbs are very strong ; its hair is short and smooth, of a bright tawny colour : its back, sides, and flanks, are elegantly marked with roundish black spots, disposed in circles ; there are from four to five of these spots in each circle, with a single black spot commonly in the centre of each ; on the face and legs there are single spots only ; on the top of the back there is a row of oblong spots, the longest next the tail ;



PANTHER



the chest and belly are white ; the chest marked with transverse dusky stripes ; the belly and tail with large irregular black spots ; its ears are short and pointed : and the point of its nose is brown. It differs from the leopard in its having a deeper colour, larger size, and central spots.

It inhabits Africa, from Barbary to the remotest parts of Guinea. This species is next in size to the tiger ; it is next to it also in cruelty, and in its general enmity to the animal creation ; it is to Africa what the former is to Asia, with this alleviation, that it is supposed to prefer the flesh of brutes to that of mankind ; but when pressed with hunger, it attacks every living creature without distinction ; its manner of taking its prey is the same with that of the tiger, always by surprize ; either lurking in thickets, or creeping on its belly, till it comes within reach. It will also climb trees in pursuit of monkeys and lesser animals ; so that nothing is secure from its attacks ; it is seldom if ever tamed, but usually retains its fierce, its malevolent aspect, and perpetual growl or murmur. These and the leopards were the *variæ* and *pardi* of the ancients. One would think that the numbers the Romans drew from thence for their public shews, should have exhausted the deserts of Africa. Scaurus exhibited at one time one hundred and fifty panthers ; Pompey the Great four hundred and ten ; Augustus four hundred and twenty. They probably thinned the coasts of Mauritania of these animals ; but they still swarm in Guinea.

Animals of this species, though they can never be tamed, are sometimes trained to the chase ; but great caution is requisite in conducting and exercising them. When one of them is taken a hunting, he is carried in a cart shut up in a cage, the door of which is opened when game appears :

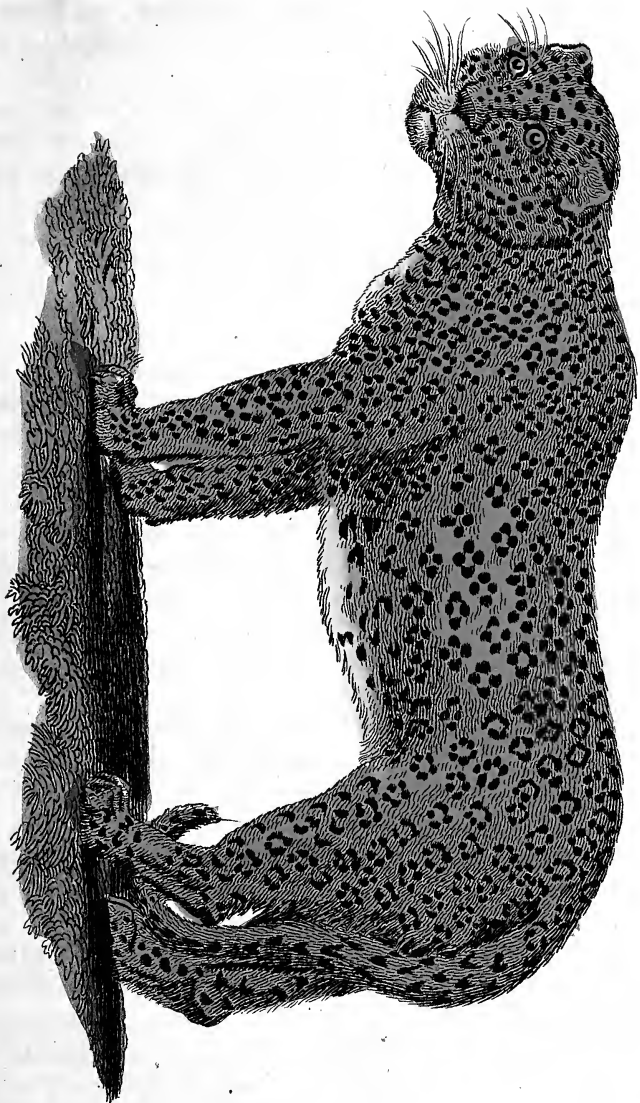
he then springs towards the animal, and, generally, at three or four bounds, strangles it ; but if he misses his aim, he becomes furious, and sometimes attacks his master, who commonly prevents this hazard, by carrying along with him pieces of flesh, or live animals, as lambs or kids, one of which he throws to him to appease his rage, till he gets a cover over his eyes, puts on his chain, and conducts him back to his cart.

#### LEOPARD.

THIS species is considerably less than the former ; its length from the nose to the tail is only four feet ; and its tail is two feet long.

It is of a lively yellow colour ; marked on the back and sides with small spots, disposed in circles, and placed pretty closely together ; its face and legs are marked with single spots ; its breast and belly are covered with longer hairs than the rest of its body, of a whitish colour ; the spots on its tail are large and oblong.

It inhabits Senegal and Guinea, and spares neither man nor beast. When the beasts of chase fail, the leopards descend in crowds from the interior parts of Africa, and make vast havock among the numerous herds that cover the rich meadows of the Lower Guinea ; they tear their prey in pieces with both claws and teeth : and though perpetually devouring, they are always thin ; the panthers are their enemies, and destroy numbers of them ; the negroes take them in pitfalls covered at the top with slight hurdles, on which is placed some flesh as a bait ; when they have killed one, they feast on its flesh, which is said to be as white as veal, and very well tasted. The negresses make beads or a collar of its teeth, and attribute to them certain virtues. The skins



LEOPARD.





are frequently brought to Europe, and are reckoned very valuable. Buffon says, that when it is of a bright yellow, and has its spots black and well defined, one skin will fetch eight or ten louis d'ors.

In Asia, it is found in the mountains of Caucasus, from Persia to India ; and also in China, where it is called poupi. The Bucharian traders, who often bring their skins to Russia, call them bars. It inhabits Arabia also, where it is called nemr. It is said that in that country, as well as Egypt, it does no hurt to man unless provoked ; but will enter houses by night and destroy cats.

In the year 1708, if we may believe the account of Kolben, two leopards, a male and female, with three young ones, entered a sheep-fold at the Cape. The old ones killed nearly a hundred sheep, and regaled themselves with the blood. When they were satiated, they tore a carcass into three pieces, and gave one of these to each of their young ones. They then took each a whole sheep ; and thus laden began to move off. Having been observed however, they were way-laid on their return, and the female and three young ones killed ; but the male effected his escape. The same writer also informs us, that the leopard will not eat carrion, nor deign to touch what has been killed by any other beast.

The late sir Ashton Lever had a leopard, which he kept in a cage at Leicester-house. It had become so tame, as always to seem highly pleased and gratified by caresses and attention, purring and rubbing its sides against the cage like a cat. Sir Ashton gave it to the royal ménagerie in the tower ; where a person, before acquainted with it, saw it after an interval of more than a year, notwithstanding which it appeared instantly to re-

cognize him, and began as usual to renew its caresses.

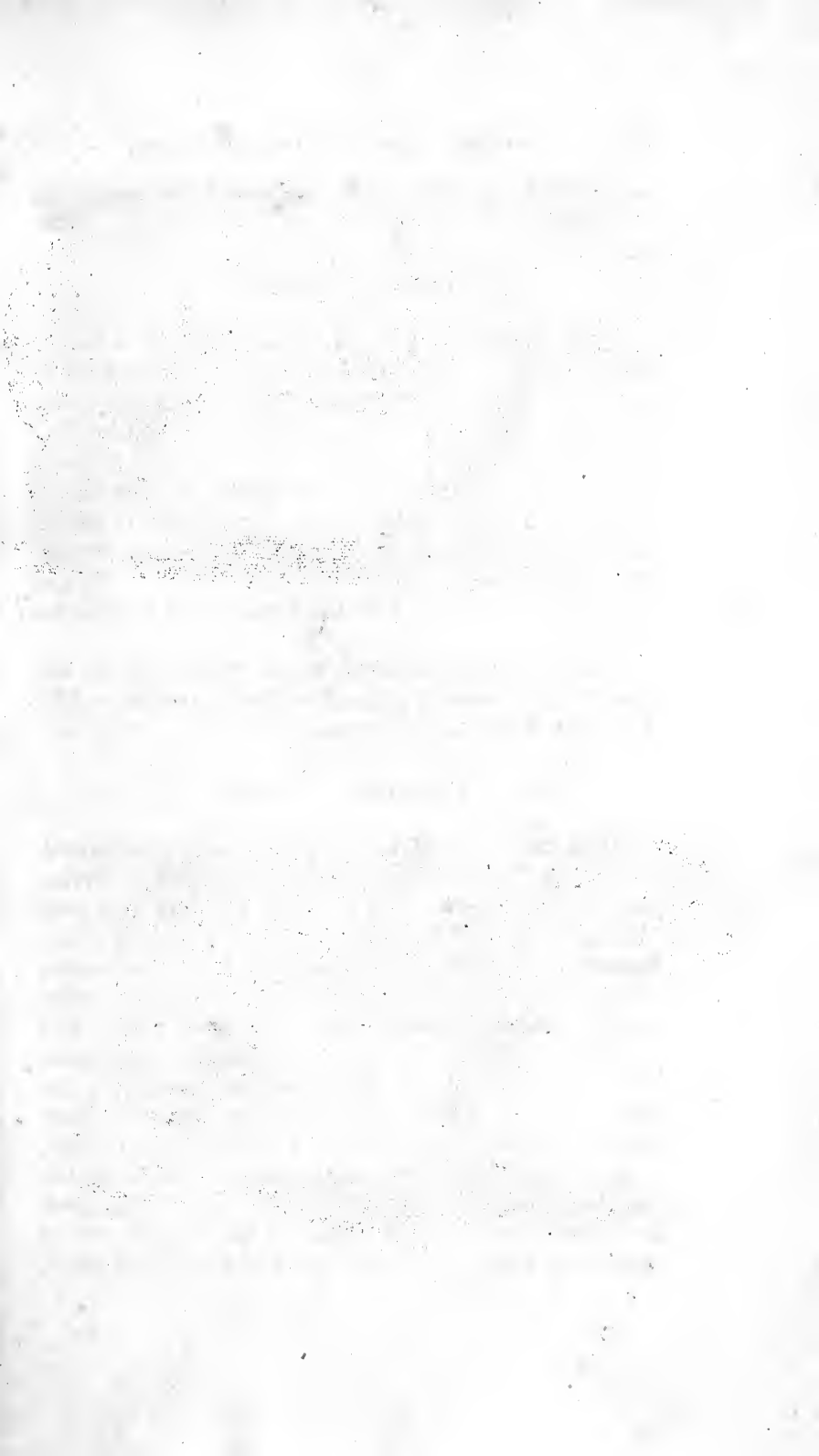
### LESSER LEOPARD.

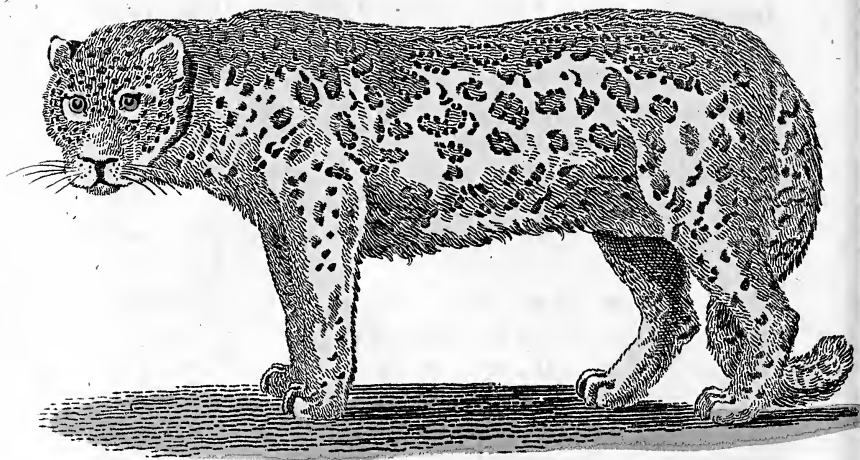
THIS species is not half the size of the former : its tail is also shorter in proportion, and tapers to a point ; whereas the tails of the panther and great leopard are of equal thickness from top to bottom ; its face is spotted with black ; it has a great black spot on each side of its upper lip ; its breast is marked with small spots ; its belly is white spotted with black ; its back, sides, and rump, are covered with hair of a bright yellow, marked with circles of spots like the former, but the circles are less.

One of these was kept some years ago in the tower, and seemed a good-natured animal.—Mr. Pennant is its only describer.

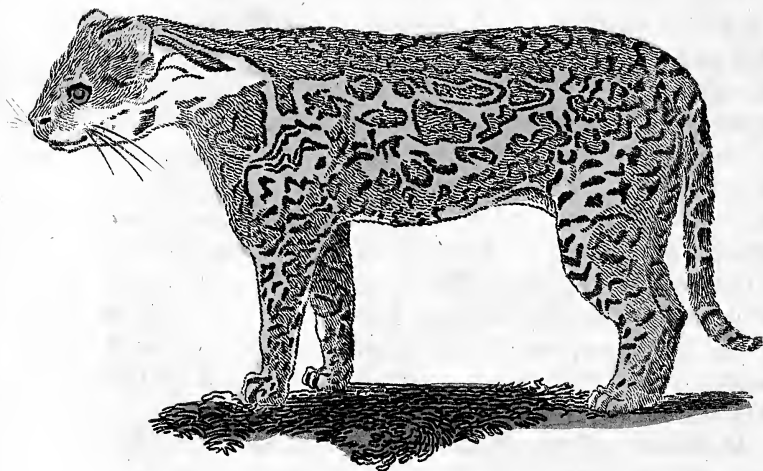
### HUNTING LEOPARD.

THIS animal is of the size of a large greyhound, of a long make, and has long legs and a narrow chest. It has a small head ; its eyes are of a pale orange ; the end of its nose black ; a dusky line runs from each corner of the mouth to the corner of each eye ; its ears are short ; of a tawny colour, marked with a brown bar ; its face, chin, and throat, are of a pale yellowish brown, sometimes the throat white ; the face is slightly spotted ; the body is of a light tawny brown, marked with numbers of small round black spots, not in circles, but each distinct ; the spots on the outside of the legs are larger ; the hair on the top of the neck is longer than the rest ; that on the belly is white and very long ; the tail is of a reddish brown,





ONCA.



JAGUAR.

longer than the body, marked above with large black spots, with very long hair on the under side.

It inhabits India, and is said to be tamed and trained for the chase of antelopes ; it is carried in a small kind of waggon, chained and hood-winked, till it approaches the herd. When first unchained, it does not immediately make its attempt, but winds along the ground, stopping and concealing itself till it gets a proper advantage, then darts on the animals with surprising swiftness, and overtakes them by the rapidity of its bounds ; but if it does not succeed in its first efforts, consisting of five or six amazing leaps, it misses its prey ; losing its breath, and finding itself unequal in speed, it stands still, gives up the point for that time, and readily returns to its master. This species is called in India, chittah ; it is used for the taking of jackals, as well as other animals.

## OUNCE.

THIS species is of a strong make, has a long back and short spotted legs ; and is about three feet and a half in length from the nose to the tail ; the tail, full of hair, with large black spots, is upwards of three feet ; its head is large, marked with small round spots ; its ears are short ; the hair on its body is long ; its colour ash, tinged with yellow ; behind each ear it has a large black spot ; the upper part of its neck is also varied with large single spots. The spots are small and roundish about the head, a kind of abrupt stripes along the back, variously shaped on the sides and limbs, sometimes with central spaces, and on the tail black and scattered.

It inhabits Barbary, Persia, Hyrcania, and China ; it is an animal of a more mild and gentle nature than most of the preceding, and is, like the

last, used for the chase of antelopes, and even hares ; but instead of being conveyed in a waggon like the panther or hunting leopard, it is carried on the crupper on horseback, and is as much under command as a setting dog, and returns at the least call, and jumps up behind its master ; it is supposed to be the panther of Pliny, and the lesser panther of Oppian. Their skins are brought from China, and sold in Russia for twenty shillings a-piece.

#### BRASILIAN TIGER, OR JAGUAR.

THE hair of this animal is of a bright tawny colour ; the top of its back is marked with long stripes of black ; its sides with irregular oblong spots, open in the middle ; the middle of these is of the ground colour of the hair ; the thighs and legs are marked with full black spots ; the breast and belly are whitish ; the tail is not so long as the body ; the upper part deep tawny, with large irregular black spots ; the lower with small spots.

It grows to the size of a wolf, or even larger, and inhabits the hottest parts of South America, from the isthmus of Darien to Buenos Ayres ; it is fierce and destructive to man and beast. Like the tiger, it plunges its head into the body of its prey, and sucks out the blood before it devours it ; it makes a great noise in the night, like the howling of a hungry dog ; it is a very cowardly animal, and easily put to flight, either by the shepherd's dogs or by a lighted torch, as it is afraid of fire ; it lies in ambush near the sides of rivers, where it sometimes fights a singular combat with the crocodile. When the jaguar comes to drink, the crocodile, ready to surprize any animal that approaches, raises his head out of the water ; the

former instantly strikes its claws into the eyes, the only penetrable part of this dreadful reptile, who immediately dives under water, pulling his enemy along with him, where they commonly both perish.

### MEXICAN TIGER, OR OCELOT.

THIS animal is about four times the size of a large cat, and almost as large as the jaguar. It is very strongly made ; its upper parts are of a bright tawny ; its sides whitish, marked lengthways with long stripes of black, hollow, and of a richer tawny in the middle, in which are sprinkled some small black spots ; from the neck towards the shoulders point others of the same colours ; a black stripe extends along the back from head to tail ; there is also a black stripe from the nostrils to the corners of the eyes ; its forehead is spotted with black ; its legs are whitish varied with small black spots ; the tail is also spotted with small spots near its base, and with larger near the end, which is black.

An animal, supposed to be the female of this species, was shewn some years ago in London. Its shoulders were both barred and spotted ; the tail not so long as the body, with large spots above and small beneath. The colours of the female are not so vivid as those of the male.

It inhabits Mexico, the neighbourhood of Carthagen, and Brasil ; lives in the mountains, and is very voracious, but afraid of mankind ; it preys on calves and different sorts of game ; lurks amidst the leaves of trees ; and sometimes will extend itself along the boughs as if dead, till the monkeys, tempted by their natural curiosity, approaching to examine it, become its prey.

Buffon says, of all spotted animals, the robe of

the male of this species is unquestionably the most beautiful and the most elegantly variegated. Even that of the leopard is not to be compared with it for vivacity of colours, and symmetry of design ; far less of the jaguar, panther, and ounce. But in the female the colours are fainter, and the design more irregular. They prefer blood to flesh ; hence they destroy a great number of animals ; because, instead of satiating themselves by devouring their flesh, they only quench their thirst by drinking the blood. The males have a remarkable superiority over the females ; the latter never presume to partake of the prey till the former have enough. They produce but two young at a litter.

### PUMA.

THIS animal has a very small head, ears a little pointed, large eyes, and a white chin ; his back, neck, rump, and sides, are of a pale brownish red, mixed with dusky hairs ; his breast, his belly, and the inside of his legs cinereous ; the hair on his belly is long ; his tail is dusky and ferruginous ; the tip of it is black. His teeth are of a vast size ; his claws are white ; the outmost one of the fore feet much larger than the others. He is long bodied, and stands high on his legs ; his length from the nose to the tail is five feet three inches ; his tail two feet eight.

He inhabits the continent of America, from Canada to Brasil, and has been mistaken for the lion ; he is the scourge of the colonies in the hotter and less populous parts of America ; fierce and ravenous to the highest degree ; he swims over broad rivers, and attacks cattle even in the inclosures ; and, when much pressed with hunger, spares not even the human species. In North America, however, their fury seems to be subdued



by the rigour of the climate ; the smallest cur, in company with its master, makes them seek for security, by running up trees ; but they are equally destructive to domestic animals, and are the greatest plague the planter has. When they lie in wait for the moose or other deer, they lie close on the branch of some tree, till the animal passes underneath, then they drop on it, and soon destroy it. They also make the wolf their prey. They conceal such part of their prey as they cannot eat : they pur like a cat, and have soft fur of some value among the Indians, who cover themselves with it during the winter ; their flesh is also eaten, and said to be as good and as white as veal.

#### CANGUAR, OR BLACK TIGER.

THIS name having been applied to different species, is apt to create some degree of confusion of ideas ; it is the name given by the natives of South America to most of those ravenous animals that are to them objects of terror. This species grows to the size of a heifer of a year old, and has vast strength in its limbs. It inhabits Brasil and Guiana. It is cruel and fierce ; much dreaded by the natives ; but happily it is a scarce species. Its head, back, sides, fore part of the legs, and its tail, are covered with short and glossy hair of a dusky colour ; sometimes spotted with black, but generally plain ; its upper lip is white ; it has a black spot at each corner of its mouth, long hairs above each eye, and long whiskers on the upper lip ; its lower lip, its throat, belly, and the inside of its legs, are whitish, or of a very pale ash-colour ; its paws are white, and its ears pointed.

## CINEREOUS CAT.

THIS seems to be described only by Mr. Pennant, who informs us that it is about the size of the ocelot, and is a native of Guinea. It is of a cinereous colour, palest on the legs and belly; the irides are hazel; the tip of the nose red: ears sharp and rounded, black on the outside, grey within; from the nose to the eye, on each side, a black line, and above and beneath each eye a white one; sides of the mouth white, with four rows of small black spots; from the hind part of the head to the back and shoulders run some long, narrow, hollow stripes; along the top of the back two rows of oval black spots; the marks of the sides long, hollow, and irregular, extending from the shoulders to the thighs; shoulders both barred and spotted; tail not so long as the body, with large spots above, and small beneath. This species, according to Mr. Pennant's description as given above, seems to approach extremely near to the ocelot, the female of which inclines much to ash-colour; but being expressly said to be a native of Guinea, we cannot suppose it the same species.

## JAPAN CAT.

THIS is said to be of the size of a common cat, has a tail ten inches and a half long; the ears are upright and pointed; colour of the face and lower part of the neck whitish; breast and lower part of the belly a clear grey; body part yellow and grey, mixed with black, disposed in transverse ways. Along the back, quite to the tail, is a broad band of black, which also extends over the upper part of the tail; the lower part is semi-annulated with

black and grey. Its cry is said to resemble the mewling of a great cat.

#### GUIGNA CAT.

THIS, which is described by Molina in his account of Chili, is of the size of a common cat, and inhabits forests. Its colour is tawny, marked with round black spots, five lines in diameter, extending along the back to the tail.

#### COLOROLO, OR COROLOLO.

THIS also is described by Molina. Like the former species it inhabits the forests, and preys on birds and mice, and is said sometimes to infest poultry yards. Its colour is white, marked with irregular spots of black and yellow; the tail encircled with black quite to the point. The head and tail in this, and the preceeding animal are larger in proportion than the common cat.

#### CAYENNE CAT, OR MARGAY.

THIS animal, of a bright tawny colour, is of the size of a common cat. Its face is striped downwards with black. Its shoulders and body are also marked with stripes, and oblong large black spots: its legs with small ones. Its breast, the inside of its legs and thighs, whitish spotted with black. The tail is very long, marked with black, tawny, and grey. It inhabits South America, and perhaps Louisiana, and lives on feathered game and poultry. It is very active. It goes by bounds or leaps, and lives much on trees. Its voice is like that of the common cat. It brings forth in all seasons of the year, in hollow trees,

and has two at a time. It seems a species of wild cat; but its hair is shorter than that of those creatures in general, its head more square, and its muzzle and tail longer. It is supposed to be untamable.

### BENGAL CAT.

THESE cats have white whiskers, large dusky ears, with a white spot in the middle of the outside; between each eye and the nose, a white line, and another under each eye. Their colour is a beautiful pale yellowish brown. The head and face is striped downward with black. Along the back there are three stripes of the same colour, pointing towards the tail. Behind each shoulder to the belly, there is a black line. The chin and throat are white, surrounded with a semi-circle of black. The breast, belly, and inside of the limbs are white. The spots on those parts, as well as those on the legs and rump, are round. The tail is long, full of hair, brown annulated with black.

This species is distinguished from the common cat by this peculiarity, that it is not afraid of being wet, but takes to the water like a water-dog. There was one of them brought to England, which swam on board a ship at anchor off the coast of Bengal. After it was brought to England, it coupled with the female domestic cats, which produced young, resembling the male in marks on the body and in character; but the ground colour was cinereous. Mr. Pennant says, that he saw one of these plunge into a vessel full of water about two feet deep, and bring up a bit of meat, flung in by way of trial; that it was far better mouser than the tame cat, and in a short time

destroyed swarms of rats, which, in spite of the domestic breed of cats, had made most horrible ravages.

These small spotted species are called by the general name of tiger cats. Several kinds of them are found in the East Indies, and in the woods near the Cape of Good Hope. A good history of them, however, is still wanted. Kolben mentions two kinds at the Cape. One he calls the wild red cat, having a streak of bright red running along the ridge of the back to the tail, and losing itself in the grey and white on the sides. The skins of this species are said to give ease in the gout, and are much valued on that account at the Cape. The other he calls the bush cat ; which, he says, is the largest of the wild cats in the countries about the Cape.

The *saca* is an obscure species of the wild cat, said to be found in Madagascar. They are very beautiful, and couple with the tame cats. The tails of the domestic kinds in that island are, for the most part, turned up.

#### MANUL.

THIS cat, of the size of a fox, in its robust limbs and dusky colour very much resembling a lynx, inhabits all the middle parts of the Northern Asia, from the Ural to the Amur. It loves open, woodless, and rocky countries, and preys on the lesser quadrupeds. It has a large head. Its colour is universally tawny, mixed with a few white and brown hairs. The crown of its head is speckled with black ; its cheeks are marked with two dusky lines running obliquely from the eyes. Its feet are striped obscurely with dark lines. Its tail is longer in proportion than that of the domestic cat, of an equal thickness in all parts, and beset

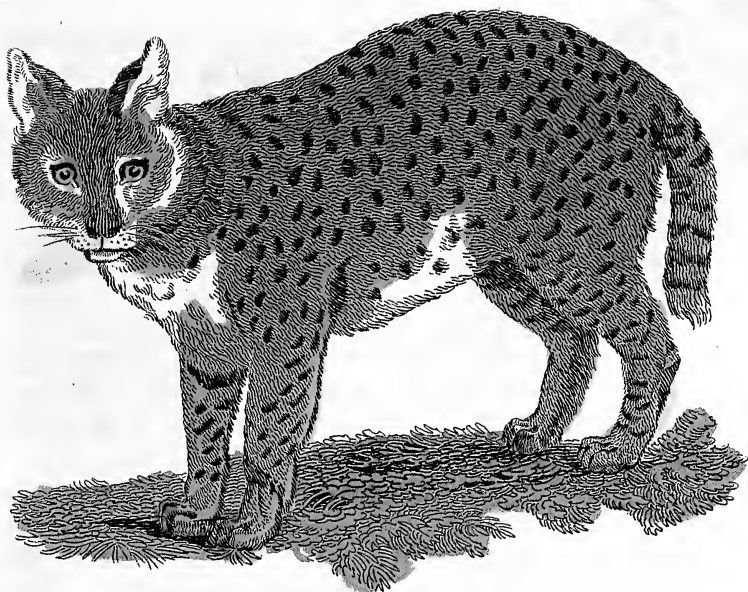
thickly with hair. It is also encircled with ten black rings ; the three next the tip almost touch one another ; the rest are more remote.

## CAPE CAT.

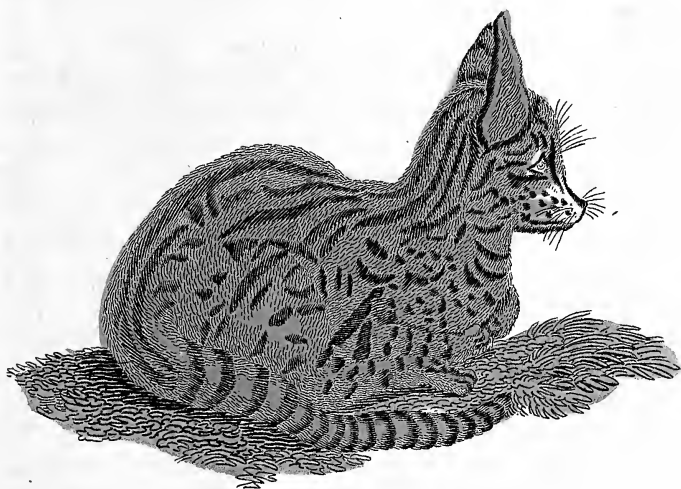
THIS is an elegant animal, and is found in a wild state, in the mountains at the Cape of Good Hope. It is considerably larger than the domestic cat. The colour is a bright tawny ; marked on the back with oblong black streaks, and in the other parts with blotches of the same. A skin, measured by Mr. Pennant, was found to be three feet from the nose to the tail.

In their native mountains, these animals are very destructive to rabbits, young antelopes, lambs, and even to all the different species of birds. In disposition, however, they are not so fierce as the generality of their tribe ; and when taken, they are easily rendered tame. Labat says, (as it seems though without sufficient foundation,) that their appearance bespeaks cruelty, and their eyes a great degree of ferocity.

When Dr. Forster and his son touched at the Cape, in the year 1795, one of these animals was offered to him for sale. But from its having a broken leg, he refused it, under the apprehension that it would not be able to bear a passage to Europe. It was brought in a basket to his apartment, where he kept it above four-and-twenty hours ; which gave him an opportunity, not only of describing it, but, in some measure, of observing its manners and economy. These seemed perfectly analogous to those of our domestic cats. It ate raw fresh meat, and appeared to attach itself very much to its feeders and benefactors. In its disposition it was gentle, and had been rendered perfectly tame. After Dr. Forster had fed



SERVAL.



CAPE CAT.





it a few times; it followed him like a tame favourite cat. It was fond of being stroked and caressed, rubbed its head and back against the person's clothes who fed it, and seemed very desirous of being noticed. It purred as our domestic cats do when they are pleased. At this time it was about nine months old, and had been taken when quite young in the woods.

## CAT.

“THE cat,” says Buffon, “may be considered as a faithless friend, brought to oppose a still more insidious enemy. It is, in fact, the only animal of this tribe whose services can more than recompense the trouble of their education, and whose strength is not sufficient to make its anger formidable. The lion, or the tiger, may easily be tamed, and rendered subservient to human command; but even in their humblest and most familiar moments, they are still dangerous; since their strength is such, that the smallest fit of anger or caprice may have dreadful consequences. But the cat, though easily offended, and often capricious in her resentments, is not endowed with power sufficient to do any great mischief. Of all animals when young, there is none more prettily playful than the kitten; but it seems to lose this disposition as it grows old, and the innate treachery of its kind is then seen to prevail. From being naturally ravenous, education teaches it to disguise its appetites, and to watch the favourable moment of plunder; supple, insinuating, and artful, it has learned the arts of concealing its intentions till it can put them into execution; when the opportunity offers, it at once seizes upon whatever it finds, flies off with it, and continues at a distance till it supposes its offense forgotten. The cat has only

the appearance of attachment ; and it may easily be perceived, by its timid approaches, and side-long looks, that it either dreads its master, or distrusts his kindness ; different from the dog, whose caresses are sincere, the cat is assiduous rather for its own pleasure, than to please ; and often gains confidence, only to abuse it. The form of its body, and its temperament, correspond with its disposition ; active, cleanly, delicate, and voluptuous, it loves its ease, and seeks the softest cushions to lie on. Many of its habits, however, are rather the consequences of its formation, than the result of any perverseness in its disposition ; it is timid and mistrustful, because its body is weak, and its skin tender ; a blow hurts it infinitely more than it does a dog, whose hide is thick, and body muscular ; the long fur in which the cat is clothed, entirely disguises its shape, which, if seen naked, is long, feeble, and slender ; it is not to be wondered, therefore, that it appears much more fearful of chastisement than the dog, and often flies, even when no correction is intended. Being also the native of the warmer climates, it chooses the softest bed to lie on, which is always the warmest.

“ The cat goes with young fifty-six days, and seldom brings forth above five or six at a time. The female usually hides the place of her retreat from the male, who is often found to devour her kittens. She feeds them for some weeks with her milk, and whatever small animal she can take by surprise, accustoming them betimes to rapine. They live to about the age of ten years ; and, during that period, they are extremely vivacious, suffering to be worried a long time before they die.

“ The young kittens are very playful and amusing ; but their sport soon turns into malice, and they, from the beginning, show a disposition to cruelty ; they often look wistfully towards the

cage, sit centinels at the mouth of a mouse-hole, and, in a short time, become more expert hunters, than if they had received the instruction of art. Indeed, their disposition is so incapable of constraint, that all instruction would be but thrown away. It is true, that we are told of the Greek monks, of the isle of Cyprus, teaching cats to hunt the serpents with which the island is infested; but this may be natural to the animal itself, and they might have fallen upon such a pursuit without any instruction. Whatever animal is much weaker than themselves, is to them an indiscriminate object of destruction. Birds, young rabbits, hares, rats and mice, bats, moles, toads and frogs, are all equally pursued; though not, perhaps, equally acceptable. The mouse seems to be their favourite game; and, although the cat has the sense of smelling in but a mean degree, it, nevertheless, knows those holes in which its prey resides. They will watch a whole day until the mouse appears, and continue quite motionless until it come within reach, and then seize it with a jump. Of all the marks by which the cat discovers its natural malignity, that of playing and sporting with its little captive, before killing it outright, is the most flagrant.

“The fixed inclination which they discover for this peculiar manner of pursuit, arises from the conformation of their eyes. The pupil in man, and in most other animals, is capable but of a small degree of contraction and dilation, it enlarges a little in the dark, and contracts when the light pours in upon it in too great quantities. In the eyes of cats, however, this contraction and dilation of the pupil is so considerable, that the pupil, which, by day-light appears narrow and small like the black of one's nail, by night expands over

the whole surface of the eye-ball, and, as every one must have seen, their eyes seem on fire. By this peculiar conformation, their eyes see better in darkness than light ; and the animal is thus better adapted for spying out, and surprising its prey.

“ Although the cat is an inhabitant of our houses, yet it cannot properly be called a dependant ; although perfectly tame, yet it acknowledges no obedience ; on the contrary, it does only just what it thinks fit, and no art can controul any of its inclinations. In general, it is but half tamed ; and has its attachments rather to the place in which it resides, than to the inhabitant. If the inhabitant quits the house, the cat still remains ; and if carried elsewhere, seems for a while bewildered with its new situation. It must take time to become acquainted with the holes and retreats in which its prey resides, with all the little labyrinths through which they often make good an escape.

“ The cat is particularly fearful of water, of cold, and of ill smells. It loves to keep in the sun, to get near the fire, and to rub itself against those who carry perfumes. It is excessively fond of some plants, such as valerian, marum, and cat-mint ; against these it rubs, smells them at a distance, and, at last, if they be planted in a garden, wears them out.

“ This animal eats slowly, and with difficulty, as its teeth are rather made for tearing, than chewing its aliments. For this reason, it loves the most tender food, particularly fish, which it eats as well boiled as raw. Its sleeping is very light ; and it often seems to sleep, the better to deceive its prey. When the cat walks, it treads very softly, and without the least noise ; and as to the necessities of nature, it is cleanly to the last degree.

Its fur also is usually sleek and glossy; and, for this reason, the hair is easily electrified, sending forth shining sparks, if rubbed in the dark."

The wild cat breeds with the tame; and, therefore, the latter may be considered only as a variety of the former; however, they differ in some particulars; the cat, in its savage state, is somewhat larger than the house-cat; and its fur being longer, gives it a greater appearance than it really has; its head is bigger, and face flatter; the teeth and claws much more formidable; its muscles very strong, as being formed for rapine; the tail is of a moderate length, but very thick and flat, marked with alternate bars of black and white, the end always black; the hips, and hind part of the lower joints of the leg, are always black; the fur is very soft and fine; the general colour of these animals, in England, is a yellowish white, mixed with a deep grey. These colours, though they appear at first sight confusedly blended together, yet, on a close inspection, will be found to be disposed like the streaks on the skin of the tiger, pointing from the back downwards, rising from a black list, that runs from the head, along the middle of the back, to the tail. This animal is found in our larger woods; and is the most destructive of the carnivorous kinds in this kingdom. It inhabits the most mountainous and woody parts of these islands, living mostly in trees, and feeding only by night. It often happens, that the females of the tame kind go into the woods to seek mates among the wild ones. It should seem, that these, however, are not original inhabitants of this kingdom, but were introduced first in a domestic state, and afterwards became wild in the woods, by ill usage or neglect. Certain it is, the cat was an animal much higher in esteem among our ancestors than it is at present. By the

laws of Howel, the price of a kitten, before it could see was to be a penny; till it caught a mouse, two-pence; and, when it commenced mouser, four-pence; it was required, besides, that it should be perfect in its senses of hearing and seeing, be a good mouser, have the claws whole, and be a good nurse. If it failed in any of these qualities, the seller was to forfeit to the buyer the third part of its value. If any one stole or killed the cat that guarded the prince's granary, he was to forfeit a milch ewe, its fleece, and lamb, or as much wheat as when poured on the cat, suspended by the tail, (the head touching the floor) would form a head high enough to cover the tip of the former. From hence we discover, besides a picture of the simplicity of the times, a strong argument that cats were not naturally bred in our forests. An animal that could be so easily taken, could never have been rated so highly; and the precautions laid down to improve the breed, would have been superfluous, in a creature that multiplies to such an amazing degree.

In our climate, we know but of one variety of the wild cat; and, from the accounts of travellers, we learn, that there are but very few differences in this quadruped in all parts of the world. The greatest difference, indeed, between the wild and the tame cat, is rather to be found internally than in their outward form. Of all other quadrupeds, the wild cat is, perhaps, that whose intestines are proportionably the smallest and the shortest. The intestines of the sheep, for instance, unravelled out, and measured according to their length, will be found to be above thirty times the length of its body; whereas the wild cat's intestines, being measured out, will not be found above three times the length of its body. This is a surprising difference; but we may ac-

count for it, from the nature of the food in the two animals; the one living upon vegetables, which require a longer, and a more tedious preparation, before they can become a part of its body; the other living upon flesh, which requires very little alteration, in order to be assimilated into the substance of the creature that feeds upon it. The one, therefore, wanted a long canal for properly digesting and straining its food; the other but a short one, as the food is already prepared to pass the usual secretions; however, a difficulty still remains behind; the intestines of the wild cat are, by one-third, shorter than those of the tame. How can we account for this? If we say that the domestic cat, living upon more nourishing and more plentiful provision, has its intestines enlarged to the quantity with which it is supplied, we shall find this observation contradicted in the wild boar and the wolf, whose intestines are as long as those of the hog or the dog, though they lead a savage life, and, like the wild cat, are fed by precarious subsistence. The shortness, therefore, of the wild cat's intestines, is still unaccounted for; and most naturalists consider the difficulty as inextricable. We must leave it, therefore, as one of those difficulties which future observation or accident are most likely to discover.

The domestic cat, although it does not exhibit the affectionate attachment of the dog, yet is not destitute of either gentleness or gratitude. A very singular example of this is recorded in Mr. Pennant's Account of London. Henry Wriothesly, earl of Southampton, the friend and companion of the earl of Essex in his fatal insurrection, having been some time confined in the tower, was one day surprised by a visit from his favorite cat; which,

says tradition, reached its master by descending the chimney of his apartment.

A physician of Lyons, in July, 1800, was requested to inquire into a murder that had been committed on the body of a woman of that city. In consequence of this solicitation, he went to the residence of the deceased, where he found her extended lifeless on the floor and weltering in her blood. A large white cat was mounted on the cornice of a cupboard, at the farther end of the apartment, where he seemed to have taken refuge. He sat motionless ; with his eyes fixed on the corpse, and his attitude and looks expressing horror and affright. The following morning, he was found in the same station and attitude ; and when the room was filled with officers of justice, neither the clattering of the soldiers' arms, nor the loud conversation of the company, could in the least degree divert his attention. As soon, however, as the suspected persons were brought in, his eyes glared with increased fury ; his hair bristled ; he darted into the middle of the apartment, where he stopped for a moment to gaze at them ; and then precipitately retreated under the bed. The countenances of the assassins were disconcerted ; and they now, for the first time during the whole course of the horrid business, felt their atrocious audacity forsake them.

Few animals exhibit more maternal tenderness, or shew a greater attachment to their young, than the cat. The assiduity with which she attends them, and the pleasure which she seems to take in all their playful tricks, afford a very grateful entertainment to every observer of nature. She has also been known not only to nurse with tenderness the young of different individuals of her own species, but even those of other kinds of animals.



“ My friend “ says Mr. White, in his *Natural History of Selborne*” had a little helpless leveret brought to him, which the servants fed with milk from a spoon ; and about the same time his cat kittened, and the young were dispatched and buried. The hare was soon lost ; and was supposed to have been killed by some dog or cat. However, in about a fortnight, as the master was sitting in his garden, in the dusk of the evening, he observed his cat, with tail erect, trotting towards him, and calling with little short inward notes of complacency, such as these animals use towards their kittens ; and something gamboling after her, which proved to be the leveret, that the cat had nourished with her milk, and continued to support with great affection. Thus was a granivorous animal nurtured by a carnivorous and predacious one ! This strange affection was probably occasioned by those tender maternal feelings, which the loss of her kittens had awakened ; and by the complacency and ease she derived from the procuring of her teats to be drawn, which were too much distended with milk. From habit, she became as much delighted with this foundling as if it had been her real offspring.”

“ A boy “ says the same gentleman” had taken three young squirrels in their nest. These small creatures he put under a cat who had lately lost her kittens ; and found that she nursed and suckled them with the same assiduity and affection as if they had been her own progeny. So many persons went to see the little squirrels suckled by a cat, that the foster-mother became jealous of her charge, and in pain for their safety ; and therefore hid them over the ceiling, where one died.—This circumstance shewed her affection for these foundlings, and that she supposed the squirrels to be her own young.”

Some years ago a sympathy of this nature took place, in the house of Mr. James Greenfield, of Maryland, betwixt a cat and a rat. The cat had kittens, to which she frequently carried mice and other small animals for food ; and among the rest she is supposed to have carried to them a young rat. The kittens, probably not being hungry, played with it ; and when the cat gave suck to them, the rat likewise sucked her. This having been observed by some of the servants, Mr. Greenfield was informed of it. He had the kittens and rat brought down stairs, and put on the floor ; and in carrying them off, the cat was remarked to convey away the young rat as tenderly as she did any of the kittens. This experiment was repeated as often as any company came to the house, till great numbers had become eye-witnesses of the preternatural affection.

These incidents, it is excellently observed by Mr. Bingley, form no bad solution of that strange circumstance, asserted by grave historians as well as poets, of exposed children being sometimes nurtured by female wild beasts, that probably had lost their young. For it is no more marvellous that Romulos and Remus, in their infant state, should be nursed by a she wolf ; than that a sucking leveret, a set of young squirrels, or a rat, should be fostered and cherished by a fierce grimalkin.

#### ANGORA CAT.

THE Angora cat is a variety of the domestic species. When M. Sonnini was in Egypt, he had one of them in his possession for a long time. It was entirely covered with long silky hairs : its tail formed a magnificent plume ; which the animal elevated, at pleasure, over its body. Not

one spot, nor a single dark shade, tarnished the dazzling white of its coat. Its nose and lips were of a delicate rose colour. Two large eyes sparkled in its round head ; one of which was a light yellow, and the other a fine blue.

This beautiful animal had even more loveliness of manners, than grace in its attitude and movements. With the physiognomy of goodness, she possessed a gentleness truly interesting. How ill soever any one used her, she never attempted to advance her claws from their sheaths. Sensible to kindness, she licked the hand which caressed, and even that which tormented her. On a journey, she reposed tranquilly on the knees of any of the company, for there was no occasion to confine her ; and if M. Sonnini, or some other person whom she knew was present, no noise whatever gave her the least disturbance.

In Sonnini's solitary moments, she chiefly kept by his side ; she interrupted him frequently in the midst of his labours or meditations, by little caresses extremely affecting, and generally followed him in his walks. During his absence, she sought and called for him incessantly, with the utmost inquietude ; and, if he was long before he re-appeared, she would quit his apartment, and attach herself to the person of the house where he lived ; for whom, next to himself, she entertained the greatest affection. She recognized his voice at a distance ; and seemed on each fresh meeting with him, to feel increased satisfaction. Her gait was frank, and her look as gentle as her character. She possessed, in a word, the disposition of the most amiable dog, beneath the brilliant fur of a cat.

" This animal," says M. Sonnini, " was my principal amusement for several years. How was the expression of her attachment depicted upon her

countenance ! How many times have her tender caresses made me forget my troubles, and consoled me in my misfortunes ! My beautiful and interesting companion, however, at length perished. After several days of suffering, during which I never forsook her, her eyes, constantly fixed on me, were at length extinguished ; and her loss rent my heart with sorrow."

The varieties of this animal in a domestic state are very numerous ; it is either entirely black ; black and white ; black, fulvous, and white, called the tortoise-shell, or Spanish cat ; white without any variegation ; fulvous and white ; dun colour or tawny, either plain or with deeper stripes ; tabby, or of a similar colour to the wild cat, but with much bolder, or more vivid variegations ; slate coloured, or blue grey, called the Chartreux cat ; slate coloured, with very long fur, especially on the neck and tail, called the Persian cat ; white, with hair of a similar length, called the Angora cat, just described ; and lastly, with penciled or tufted ears, like a lynx, which sometimes, though rarely, takes place. Those of the white variety are sometimes deaf.

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### LYNXES, OR CATS WITH SHORT TAILS.

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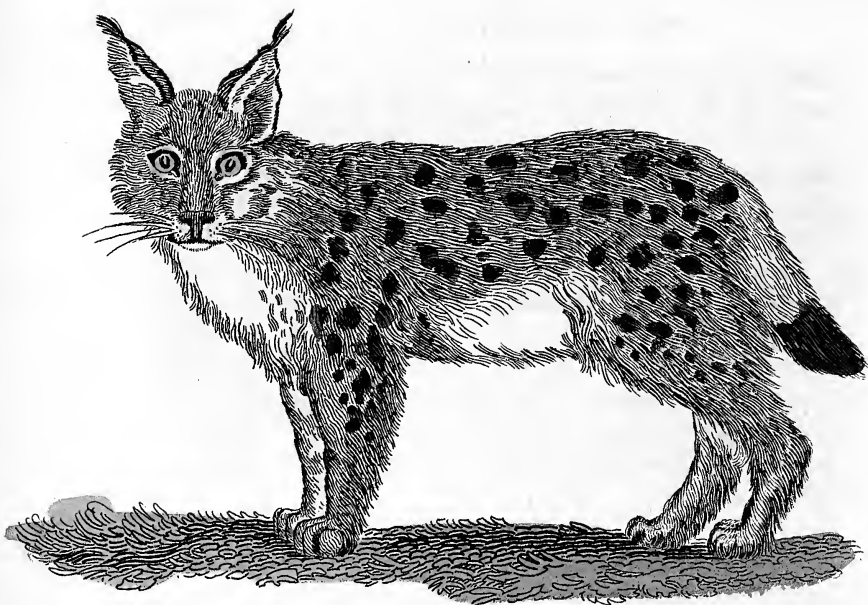
#### MOUNTAIN LYNX, OR WILD CAT OF CAROLINA.

THE length of this animal is two feet and a half ; and his tail, which is barred with black, measures only eight inches. His ears are upright and pointed, marked with two brown bars across.

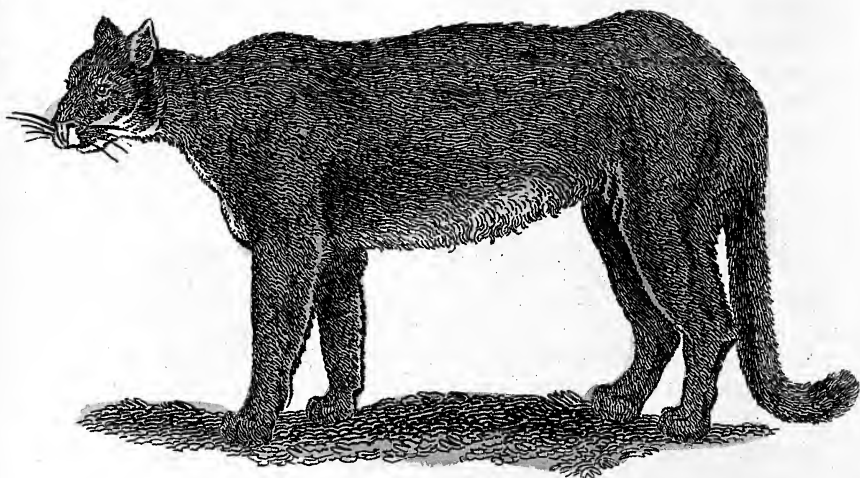


2017





LYNX.



PUMA.

The colour of the head, and of the whole upper part of the body, is a reddish brown. He is marked with long narrow stripes on the back, and with numerous round small spots on the sides and legs. His belly is whitish ; his chin and throat are of a pure white.

He inhabits North America ; is a mild and gentle animal, and grows very fat. The quauhpecotli of Mexico agrees in nature with this ; but is of a brown or dusky colour, darkest on the back, and glossy. Its feet are black ; the hair on its belly is long and white ; and its tail is thick and long. The cat of New Spain is considered as a variety of this species.

#### SERVAL, OR MOUNTAIN CAT.

THIS animal, four times the size of a common cat, differs widely from the preceding in these particulars : the orbits of its eyes are white ; the spots on its body universally round. In its nature it is very fierce and untameable. It inhabits the woods in the mountainous parts of India, lives and breeds on trees, and scarcely ever descends to the ground. It leaps with great agility from tree to tree. It is called by the natives of Malabar maraputé, and by the Portuguese the serval.

#### LYNX.

THIS wild cat has also a short tail, black at its end ; its eyes are of a pale yellow ; the hair under its chin is long and full ; the hair on its body is also long and soft, of an ash colour, tinged with red, and marked with dusky spots, more or less distinct on different subjects ; in some they are scarcely visible. Its belly is whitish ; its ears are erect, and tufted with long black hairs ; these pen-

cils of hairs at the ears are characteristic of the different species of lynxes ; its legs and feet are very thick and strong.

A Russian lynx will measure, from nose to tail, four feet six inches, while the tail is only six inches long. They vary sometimes in their colour.

The irbys, from lake Blackash, situated to the west of the river Irtysh ; as also the katlo of the Swedes, is whitish, spotted with black, and larger than the common kind. This large variety is called by the Germans, wolf-lucks, and kalblucks, on account of its size.

It inhabits the vast forests of the north of Europe, Asia, and America, but not the hot regions of Africa, or of India, though the poets have harnessed them to the chariot of Bacchus, in his conquest of that country. The female brings two or three at a time. It is a long lived animal. It climbs trees, and lies in wait for the deer that pass under ; drops on them, and seizing the jugular vein, soon makes them its prey. It does not attack man, but is very destructive to the rest of the animal creation ; since, after sucking the blood and devouring the brains, it frequently abandons its prey, and goes in quest of fresh game.

The furs of these animals are valuable for their softness and warmth ; but their colour varies according to the season and climate. Numbers of them are annually imported from North America, and the north of Europe, and Asia. The farther north and east they are taken, the whiter they are, and the more distinct the spots. The most elegant kind is the irbys already mentioned. Their skins sell on the spot for one pound sterling each.

The ancients celebrated the lynx for its great quickness of sight, and feigned that its urine was converted into a precious stone. Our lynx, though his sight cannot penetrate stone walls, has brilliant



eyes, a mild aspect, and an agreeable and sprightly air. His urine is not converted into precious stones, though it may chance to fall upon such; but, like the cat, he covers it with earth.

He is generally about the size of a fox. The skin of the male is more spotted than that of the female. He does not run out like the wolf, but walks and springs like the cat. The wild cats, the pine weasels, the ermines, and the squirrels, are unable to escape him. He likewise seizes birds when opportunity serves. His fur is more beautiful and richer in winter than in summer.

#### BAY LYNX.

THIS animal, about twice the size of a cat, derives its name from the ground colour of its head, back, and sides, and the exterior parts of its limbs, which are of a bright bay, obscurely marked with dusky spots. Its irides are yellow; and the orbits of its eyes are edged with white; its tail is short; its ears are upright, sharp pointed, and tufted with long black hairs; its face is marked with black stripes pointing to the nose. On each side of the upper lip, there are three rows of small black spots, with long stiff hairs issuing out of them; its cheeks are marked with black curved stripes; its cheeks, lips, and lower parts are white; the inside of the fore legs is marked with two black bars, and the upper part of the tail with dusky strokes; and next the end with one of deep black; its tip and under side are white.

It is a creature of a strong make, and inhabits the inner parts of the province of New York.

## CASPIAN LYNX, OR CHAUS,

THE head of this lynx is a little more oblong than that of the common cat. Its restless shining eyes are adorned with a most brilliant golden pupil: its nose is oblong and bifid; its whiskers are scarcely two inches; its ears are erect, oval, and lined with white hairs; their outside is reddish, and their summits are tufted with black hairs; its hair is coarser than that of the cat or common lynx, but less so than that of the wolf; it is shortest on the head; but on the back it is two inches long. The colour of its head and body is a yellowish brown, or dusky; its breast and belly are of a bright brown, nearly orange; it has two obscure transverse dusky bars near the bending of the knee; its feet are like those of the cat, clothed with hair, and black below; its tail, thick and cylindric, reaches only to the flexure of its leg; it is of the same colour with the back, tipped with black, and having three black rings near its end. In its general appearance it has the form of the domestic cat; its length is two feet six inches; its tail eleven inches; its height before nineteen inches, behind twenty. It is sometimes found so large as to measure three feet. It inhabits the reeds and woods in the marshy parts that border on the western sides of the Caspian Sea. In manners, voice, and food, it agrees with the wild cat; it conceals itself during the day, and in the night wanders over the flooded tracts, in search of prey: it feeds on rats, mice, and birds, but seldom climbs trees; it is exceeding fierce, and never frequents the haunts of men. It is so impatient of captivity, that one taken in a trap, by which it had its leg broken, refused for many days the food placed by it; but, in its rage, devoured the fractured limb.

with pieces of the stake it was fastened to, and broke all its teeth in its mad efforts to get loose.

### PERSIAN LYNX, OR CARACAL.

THIS is the caracal of Buffon, and is nearly of the size of a fox ; it has a lengthened face, and small head ; its ears are black, very long and slender, and terminated with a tuft of black hairs ; the inside and bottom of the ears are white, its nose is also white, its eyes are small ; the upper part of its body is of a pale reddish brown, the tail somewhat darker ; its belly and breast are whitish ; its limbs are strong, and pretty long ; the hind part of each leg is marked with black ; its tail is about half the length of its body. It inhabits Persia, India, and Barbary. They are often brought up tame, and used in the chase of lesser quadrupeds, and the larger sorts of birds, as cranes, pelicans, and peacocks, which they surprise with great address. When they surprise their prey, they hold it fast with their mouth, and lie for some time motionless upon it : they are also said to attend the lion, and to feed on the remains of his prey. They are fierce when provoked. Dr. Charleton says, he saw one fall on a hound, which it killed and tore to pieces in a moment, though the dog defended himself to the utmost.

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### WEASEL TRIBE.

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THIS genus contains animals which have six sharp cutting teeth, with the canine teeth some-

what longer ; a long and slender body, with short legs ; a sharpened visage ; and in most species, a longish tail. In some of this tribe also, the tongue is smooth ; and in others, it is furnished with prickles pointing backwards.

#### EGYPTIAN ICHNEUMON.

THE ichneumon is a native of Egypt, Barbary, and the Cape of Good Hope. Its length, from the tip of the nose to the end of the tail, is from twenty-four to forty-two inches, of which the tail occupies nearly one half. Its colour is pale reddish grey, each hair being mottled with brown or mouse colour. The eyes are of a bright red ; the ears almost naked, small, and rounded ; and the nose long and slender. The tail is very thick at the base ; from whence it gradually tapers to almost a point, where it is slightly tufted. The hair is hard and coarse ; and the legs are short.

In Egypt, the ichneumon is justly considered as one of the most useful and estimable of animals ; being an inveterate enemy to the serpents, and other noxious reptiles which infest the neighbourhood of the torrid zone. It attacks without dread that most fatal of serpents, the cobra di capello, or hooded snake ; and when it receives a wound in the combat, instantly retires, and is said to obtain an antidote from some herb, after which it returns to the attack, and seldom fails of victory. It is a great destroyer of the eggs of crocodiles, which it digs out of the sand ; and even kills multitudes of the young of those terrible creatures. It was not, therefore, without some appearance of reason, that the ancient Egyptians ranked the ichneumon among their deities.

It is at present domesticated, and kept in houses, in India and Egypt, where it is found more useful.

than a cat in destroying rats and mice. It is easily tamed, is very active, and springs with great agility on its prey. It will glide along the ground like a serpent, and seem as if without feet. It sits up like a squirrel, eats from its fore feet, and catches any thing that is flung to it. It is a great enemy to poultry, and will feign itself dead to attract them within its reach. It is said to be extremely skilful in seizing the serpent by the throat, in such a manner as to avoid receiving any injury.

“ I had,” says M. D’Obsonville, in his *Essays on the Nature of various foreign Animals*, “ an ichneumon very young, which I brought up. I fed it at first with milk, and afterwards with baked meat, mixed with rice. It soon became even tamer than a cat ; for it came when called, and followed me, though at liberty, into the country.

“ One day I brought him a small water-serpent alive, being desirous to know how far his instinct would carry him against a being with which he was hitherto totally unacquainted. His first emotion seemed to be astonishment mixed with anger, for his hair became erect ; but in an instant after, he slipped behind the reptile, and with a remarkable swiftness and agility leaped upon its head, seized it, and crushed it between his teeth. This essay, and new aliment, seemed to have awakened in him his innate and destructive voracity ; which, till then, had given way to the gentleness he had acquired from his education. I had about my house several curious kinds of fowls, among which he had been brought up, and which, till then, he had suffered to go and come unmolested and unregarded ; but, a few days after, when he found himself alone, he strangled them every

one, ate a little, and, as appeared, drank the blood of two."

In a wild state, the ichneumon is said to frequent principally the banks of rivers ; and, in times of flood, to approach the higher grounds and inhabited places in quest of prey. He is reported to swim and dive occasionally, in the manner of an otter ; and to continue beneath the water for a great length of time. His voice is very soft, somewhat like a murmur ; but unless the animal is struck or irritated, he never exerts it. When he sleeps, he folds himself up like a ball, and is not easily awaked.

The ichneumons are short lived, but grow very rapidly. In our temperate climates, they cannot, without great difficulty, be either reared or preserved. Whatever care be taken, the frosts incommode them, and they generally fall victims to the change.

#### CAFFRARIAN WEASEL.

THIS species in its general form resembles the polecat, but is nearly of the length of an otter. Its colour on all parts, except the tip of the tail, which is black, is a mixture of yellow brown and black, so as to resemble the colour of the aguti, but rather deeper, especially on the back ; the hair is of a strong and glossy nature ; the feet are blackish ; the ears very short, and covered with woolly fur. It is a native of the Cape of Good Hope.

#### ZENIC.

THIS, which is described by Sonnerat, is a Caffrarian species, and is about the size of a water-rat.

The snout is long, and in each jaw are two incisive, and six canine teeth. The whole animal is of a reddish colour, and is marked by ten transverse black bands over the back, and reaching downwards on each side, almost as in the zebra; the tail, which is scarce the length of the body, is slender, and of a deep ferruginous colour for three fourths of its length, the remainder being black. Mr. Sonnerat says nothing of this animal's manners; but we may conclude that it resembles in this respect, the rest of its congeners. It has five toes on each foot; and the claws on the fore feet are very long, and almost straight; those of the hind feet are small and crooked.

## COASSE.

THIS animal is about the size of the polecat; measuring eighteen inches from nose to tail. The tail is long and full of hair; the whole animal is a deep or blackish chocolate colour, but the tail is sometimes mixed with white.

It inhabits Mexico, and perhaps some other parts of America. This and several of the following species are remarkable for the pestiferous, suffocating, and most fetid vapour they emit from behind, when attacked, pursued, or frightened. This is their only means of defence. Some turn their tail to their enemies, and keep them at a distance by a frequent crepitus; others send forth their urine, tainted with its horrid effluvia, to the distance of eighteen feet; the pursuers are stopped by the terrible stench. Should any of this liquid fall into the eyes, it almost occasions blindness; if on the clothes, the smell will remain for several days, in spite of all washing: in order to be sweetened, they must even be buried in fresh soil. Dogs that are not true bred to the chace, run

back as soon as they perceive the smell ; those who have been used to it, will kill the animal, but are often obliged to relieve themselves, by thrusting their noses into the ground. There is no bearing the company of a dog that has killed one, for several days.

Professor Kalm was one night in great danger of being suffocated by one of them that was pursued into a house where he slept. When driven into a house where cattle are kept, they bellow through pain : indeed they are much disturbed at the sight or smell of any weasel in their stalls. One of these, that was killed in a cellar by a maid servant, so affected her with its stench, that she lay ill for several days ; and all the provisions that were in the place were so tainted, that the owner was obliged to throw them away.

Notwithstanding this, the flesh is reckoned good meat, and not unlike that of a pig ; but it must be skinned as soon as killed, and the bladder taken carefully out. The Virginian species, or skunk, is capable of being tamed, and will follow its master like a dog, and never emits its vapour except it be terrified.

It breeds in hollow trees, or holes under ground, or in the clefts of rocks. It climbs trees with great agility, kills poultry, eats eggs, and destroys birds.

#### STRIATED OR STRIPED WEASEL.

This striped species of the weasel is about the size of an European polecat, but his back is more arched ; its ears are rounded ; its head, neck, belly, legs, and tail, are black ; its back and sides are marked with five parallel white lines ; there is one on the top of the back, and two on each side ; the second extends some way up the tail, which



is long and bushy towards the end ; but it varies in the disposition of its stripes. It inhabits North America. When attacked, it bristles up its hair, and flings its body into a round form ; its vapour, like that of the last, is horrid. Du Pratz says that the male is of a shining black.

#### CONEPATL.

OF this species very little more than its mere name and descriptive character seems to be known. It is a native of New Spain, and perhaps may be nothing more than a variety of the preceding.

#### CHINCHE

Is rather smaller than the former species. It has a broad bed of white on the back, divided by a stripe of black. Its manners resemble the two former.

#### ZORILLA.

THIS is the annas of the Indians, the zorrinas of the Spaniards. Its back and sides are marked with short stripes of black and white, but the latter is tinged with yellow ; its tail is long and bushy, part white and part black ; its legs and belly are black. In size it is less than the preceding. It inhabits Peru, and other parts of South America. Its pestilential vapour overcomes even the American panther, and stupifies that formidable enemy.

#### CHINGE.

THIS, according to Molina, its first describer, seems in shape and general form to resemble the

Chinche, or *Viverra Mephitica* ; but is of a black colour, with a changeable cast of blue, and has along the back a row of round white spots reaching from head to tail. The head is long ; the ears large, well covered with hair, and pendulous : the hind legs longer than the fore. It is a native of Chili. It generally carries its head low, its back arched, and its tail, which is very bushy, spread over its back like that of a squirrel. In its manners and vapour it is said to agree with those before described. Molina affirms that the same proceeds from a certain greenish oil, ejected from a follicle or receptacle near the tail. The Indians are said to value the skin of this species on account of its beauty, and to use it for various purposes.

#### MAPURITO.

THIS is said to measure twenty inches to the tail, which is nine inches long, and whitish at the tip. It inhabits New Spain, and burrows under ground, feeding on worms and insects. Perhaps it is no other than a variety of the mephitic weasel.

The quasje is supposed to be a variety of the co-atimonds ; and the Ceylonese weasel is thought to be the same as the Ceylonese dog.

#### CAPE WEASEL, OR STINKBINKSEN.

THIS is one of the larger animals of the genus, measuring two feet from nose to tail, which is eight inches long. Its colour is a cinereous grey above, and brownish black below ; the two colours being separated along the whole length of the animal, from the base of the nose to the tail, by a stripe of black and white : the ears are scarce

visible ; the tail rather thick ; the legs short and the head large ; the snout short and somewhat pointed ; the body seems of a thicker form than is usual in this genus.

This animal, when pursued, ejects a fetid liquid, accompanied by a smell as insufferable as that of some of the American weasels or skunks, and productive of the same effects.

#### HONEY WEASEL, OR RATEL.

THIS animal, which is a native of the Cape, is, from the nose to the tail, about two feet long. Its back is ash-coloured ; and along its sides runs a light grey stripe, that divides this from its belly, which is black. The legs are short ; and the claws long, and formed for burrowing. It lives in holes under ground, and is said to be very fetid.

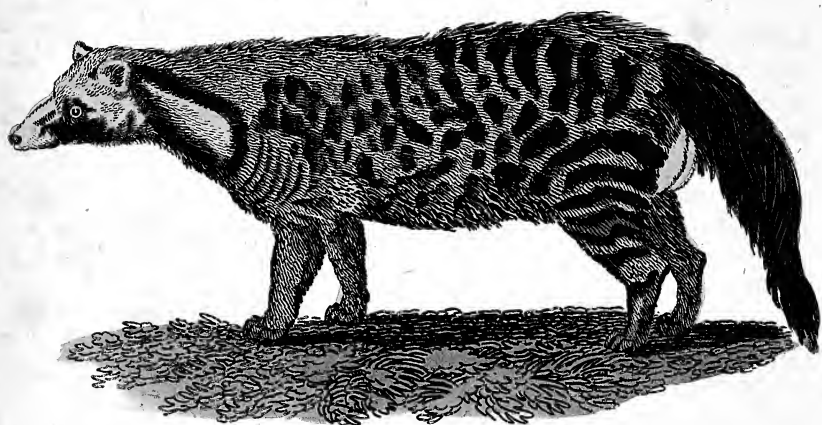
The ratel seems formed by nature to be the adversary of the bees, and the unwelcome visitor of their habitations ; and is endued with a particular faculty of discovering and attacking them within their entrenchments—As a man placed at the mast-head, can most easily descry a sail or land at a great distance in the evening, so probably this time of the day is the most convenient for the ratel to look out for his food ; for he is likewise said to be particularly attentive to his business about sun-set ; when he will sit and hold one of his paws before his eyes, in order to modify the rays of the sun, and at the same time to procure a distinct view of the object of his pursuit : and when, in consequence of peering in this manner on each side of his paw, opposite to the sun, he sees any bees fly, he knows that they are at this time going straight to their own habitation, and consequently takes care to keep in the same direction, in order to find

them. He has, besides, the sagacity to follow the cuculus indicator, a little bird, which flies on, by degrees, with a peculiar and alluring note, and guides him to the bees'-nests.

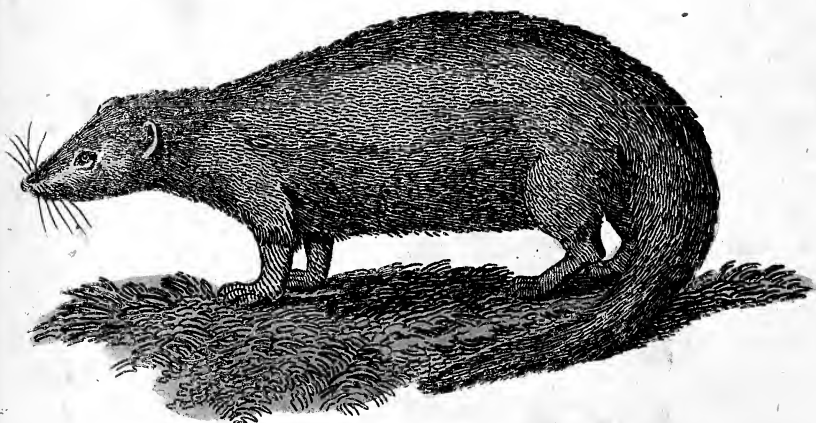
As the ratel's hairs are stiff and harsh, so its hide is tough, and the animal itself difficult to kill. The Colonists and Hottentots both assert, that it is almost impossible to kill this creature, without giving it a great number of violent blows on the nose ; on which account they usually destroy it by shooting it, or by plunging a knife into its body. The shortness of his legs will not permit him to make his escape by flight, when pursued by the hounds. He is able, however, sometimes to extricate himself from their clutches, by biting and scratching them in a most terrible manner : while, on the other hand, he is perfectly well defended from the assaults of their teeth by the toughness of his hide ; for, when a hound endeavours to bite him, it can lay hold only on this part, which instantly separates from the creature's body or flesh, as it is reported to lie loose from the skin, as within a sack ; so that, when any one catches hold of him by the hind part of his neck, and that even pretty near his head, he can turn round, as it were, in his skin, and bite the arm that seizes him. It is a remarkable circumstance, that such a number of hounds as are able collectively to tear in pieces a lion of moderate size, are said to be sometimes obliged to leave the ratel dead in appearance only. Is it not, therefore, probable, that nature, which seems to have destined the ratel for the destruction of bees, may have bestowed on it a hide so much tougher than those she has given to other animals of the viverra kind, for the purpose of defending it from the stings of these insects ?

Those bees'-nests that are built in trees, are in no danger whatever from the ratel. In the first





CIVET.



INDIAN ICHNEUMON.

transports of his rage, at having sought after these bees in vain, he gnaws and bites the trunks of the trees ; and these bites are sure marks for the inhabitants of the country that a bees' nest is to be found there. " I should myself," says Dr. Sparrman, " have entertained many doubts concerning these properties attributed to the ratel, had I not obtained various accounts of this curious animal, exactly corresponding with each other, from many experienced farmers and Hottentots, living in different parts of the Cape of Good Hope."

## CIVET.

THE civet is somewhat more than two feet long, and has a tail about half the length of its body. The ground colour is yellowish ash grey, beautifully marked with large blackish or dusky spots. The hair is coarse ; and along the back stands up, so as to form a sort of mane. The body is thickish ; and the nose sharp, and black at the tip. Three black stripes proceed from each ear, and end at the throat and shoulders. The eyes shin in the dark. It is an inhabitant of several parts of Africa and India ; and will not breed in more temperate regions, though it lives and appears in perfect health in them ; in its own climate it is very prolific.

It is active and nimble ; jumping about like a cat, and running very swiftly. It feeds on small animals ; but particularly on birds, which it takes by surprise ; and it sometimes commits depredations among poultry, when it can steal unperceived into a farm-yard. It is very voracious ; and will often roll itself, for a minute or two, on its meat, before eating. One that Barbot had at Guadeloupe, was, from the carelessness of the servant, kept without food for a whole day ; the animal,

on the following morning, gnawed his way through the cage in which he was kept, came into the room where M. Barbot was writing, and, staring about with his sparkling eyes for a few seconds, made a leap of five or six feet at a fine American parrot, that was perched on a piece of wood put into the wall for the purpose. Before his master could run to the relief of the bird, the civet had torn off its head, and begun to feast himself on his prey. Though the civet is naturally savage, it is capable of being tamed, and rendered tolerably familiar. Its voice is stronger than that of a cat, and somewhat resembles the cry of an enraged dog.

This animal is remarkable for the production of the drug called civet, sometimes erroneously confounded with musk. This substance is a secretion, formed in a large double glandular receptacle, situated at some little distance beneath the tail, and which the creature empties spontaneously. The Dutch keep great numbers alive at Amsterdam, for the purpose of collecting the drug from them. When a sufficient time for the secretion has been allowed, the animal is put into a long wooden cage, so narrow that it cannot turn itself round. The cage being opened by a door behind, a small spoon, or spatula, is introduced through the orifice of the pouch, which is carefully scraped and its contents put into a proper vessel. This operation is performed twice or thrice a week ; and the animal is said always to produce the most civet after being irritated. The quantity depends in a great measure also on the quality of the nourishment which it takes, and the appetite with which it eats. In confinement, its favorite food is boiled meat, eggs, birds, and small animals, and particularly fish.

While the French army was in Egypt, the king



of Dar-fûr sent four civets to the generals ; and some information was at the same time acquired respecting the treatment of the animals in that country. Since very few of them are found there, and these few are brought from a great distance, the inhabitants have found it expedient to adopt some modes of increasing the produce of the civet. They introduce into the bag a small quantity of butter or other fat ; then shake the animal violently, and by beating, irritate and enrage it as much as possible. This, they say, greatly accelerates the secretion ; and the fat also by these means imbibes so much of the civet, that the women of Dar-fûr use it upon their hair.

## ZIBET.

THIS, which was figured as a variety by Gesner, and more precisely discriminated by Buffon, seems to be considered by modern naturalists as a distinct species ; Mr. Pennant, however, even in his last edition, still regards it as the same with the preceding, from which, indeed, it seems to differ in so few particulars, as still to leave the determination difficult.

The zibet is chiefly found in the Indian islands. Its general aspect is the same with the former species, but its snout is somewhat sharper, its tail longer, and, instead of being black or dusky, with merely a few whitish patches at the base, is strongly semi-annulated, or banded with alternate black and white stripes ; there is no perceptible mane on the back, nor any large brown or blackish patch under the eyes as in the former animal ; the hair also is shorter and softer than in the preceding kind, and the variegations are more disposed in the form of undulations than spots, especially on the limbs. In short, this species may be called

the Indian, and the former the African civet cat. In disposition and manners they both seem to agree, as well as in the secretion of the perfume before described, which is collected from both animals in the same manner.

### THREE-STRIPED WEASEL.

THIS species is described by Mr. Schreber from Dr. Pallas. Its size is between that of the civet and the genet ; its colour is a dark ash grey, with three black dorsal stripes ; the snout and face beyond the eyes, the throat and the feet are black ; the tip of the tail black also ; beneath the eyes is a whitish spot, and the underside of the body is lighter than the upper. It is a native of Barbary.

### GENET.

THE ears of the genet are a little pointed ; the body is slender, and the tail very long. The colour of the body is a pale tawny, spotted with black ; and the ridge of the back is marked with a black line ; the tail is annulated with black and tawny, and the feet are black ; sometimes the ground colour of the hair inclines to grey. It is about the size of a marten, but the fur is shorter.

It inhabits Turkey, Syria, and Spain. It frequents the banks of rivers and rivulets, and other moist places ; Buffon says there are some found in the southern provinces of France.

They smell faintly of musk, and, like the civet, have an orifice beneath the tail. They are kept tame in the houses at Constantinople, and are useful as cats, for the purpose of catching mice.

## FOSSANE.

THE fossane weasel has a slender body, rounded ears, and black eyes ; its back and legs are covered with cinereous hair, mixed with tawny ; the sides of its face are black. From the hind part of the head, four black lines are extended towards the back and shoulders ; the tail is semi-annulated with black ; the whole under side of the body is of a dirty white.

It inhabits Madagascar and Guinea, Cochin China, and the Philippine isles. It is a fierce creature.

## FOUR-TOED WEASEL.

THIS is the surikate of Buffon, a weasel with a very sharp-pointed nose, depressed head, inflated cheeks, and a long upper jaw ; it has black whiskers, arising from warty tubera ; its irides are dusky ; the space about its eyes is black ; its ears are small, rounded, and black, and lie close to the head ; its tongue is oblong, blunt, and rough ; it has six small cutting teeth, two long canine teeth in each jaw, and five grinders on each side ; its back is very broad, and a little convex ; its belly is broad and flat ; its legs are short ; its feet small and naked at the bottom, with four toes on each. The claws on the fore feet are long, like those of the badger ; those on the hind feet are short.

Its hair is brown near the bottom, black near the ends, and hoary at the points ; that on the back is undulated or wavy ; the inside of its legs a yellowish brown ; its tail is tufted with black. It is eleven inches long ; its tail, which is thick at the base, ending pretty abrupt, measures eight inches.

It inhabits the Cape of Good Hope, where it is called meer-rat. It feeds on flesh, preys on mice, and is a great enemy to blattæ. Like the squirrel, it employs its fore paws to convey its victuals to its mouth, and laps water like a dog: it is much in motion, and always makes a grunting noise. It utters two kinds of sounds: when uneasy or disturbed, it barks like a young dog; when pleased, it emits a sound like that of a small rattle in rapid motion. It may be tamed; but it bites those whose smell it finds disagreeable. It sits quite erect, dropping its fore legs on its breast, and moving its head with great ease, as if on a pivot, and appearing as if it listened, or had just spied something new. When pleased, it makes a rattling noise with its tail; for which reason the Dutch at the Cape, call it klapper-maus. It is also found in Java, where the Javanese stile it jupe; the Dutch suracatje.

#### YELLOW OR PREHENSILE WEASEL.

THIS species has a short dusky nose, and small eyes. Its ears are short, broad, and flapping, and placed at a great distance from each other; its head is flat and broad, and its cheeks swell out; its tongue is very long; its legs and thighs are short, and very thick. It has five toes on each foot, separated, and standing all forward; its claws are large, a little hooked, and of a flesh-colour; its hair is short, close, soft, and glossy; on the head, back, and sides, it consists of a mixture of yellow and black; its cheeks, belly, and the inside of its legs, are yellow. Half way down the middle of its belly there is a dusky list, ending at the tail; and another along the middle of the back to the tail; the tail itself is of a bright tawny, mixed with black; it is round, and has the

same prehensile faculty with that of the sapajous. The body measures nineteen inches, the tail seventeen.

There was one shewn some years ago in London. Its keeper said it came from the mountains of Jamaica, and called it a potto, the name given by some writers to a species of sloth found in Guinea.

It was very good-natured and sportive, and would catch hold of any thing, and suspend itself by its tail. It lay with its head under its legs and belly.

#### MEXICAN WEASEL, OR KINKAJOU.

THE Mexican weasel has a short dusky nose, a tongue of vast length, and small eyes, encircled with a dusky colour ; its ears are short, rounded, and placed very distant from each other ; its hair is short. On the head, the upper part of the body, and the tail, the colours are yellow, grey, and black intermixed ; the throat and inside of the legs of a lively yellow ; the belly is of a dirty white, tinged with yellow ; its toes are separated ; the claws crooked, white, and guttered beneath.

This animal is about two feet four inches long ; its tail near one foot three. The tail is taper, covered with hair, except beneath, near the end, where it is naked, and of a fine flesh colour. It is extremely like the former, but larger in all its parts. Like the former, it has a prehensile tail, and is naturally very good-natured. It goes to sleep at the approach of day, wakes towards night, and becomes very lively. It makes use of its feet to catch any thing, and has many of the actions of a monkey. It eats like a squirrel, holding its food in its hands. It has a variety of cries during the night ; one like the low barking of a dog ; its

plaintive note is cooing like a dove ; its menacing, hissing like a goose or a serpent ; its angry cry is confused. It is very fond of sugar, and all sweet things ; it eats fruits and vegetables of all kinds ; it will fly at poultry, catch them under the wing, suck the blood, and leave them without tearing them. It prefers a duck to a pullet ; yet hates the water.

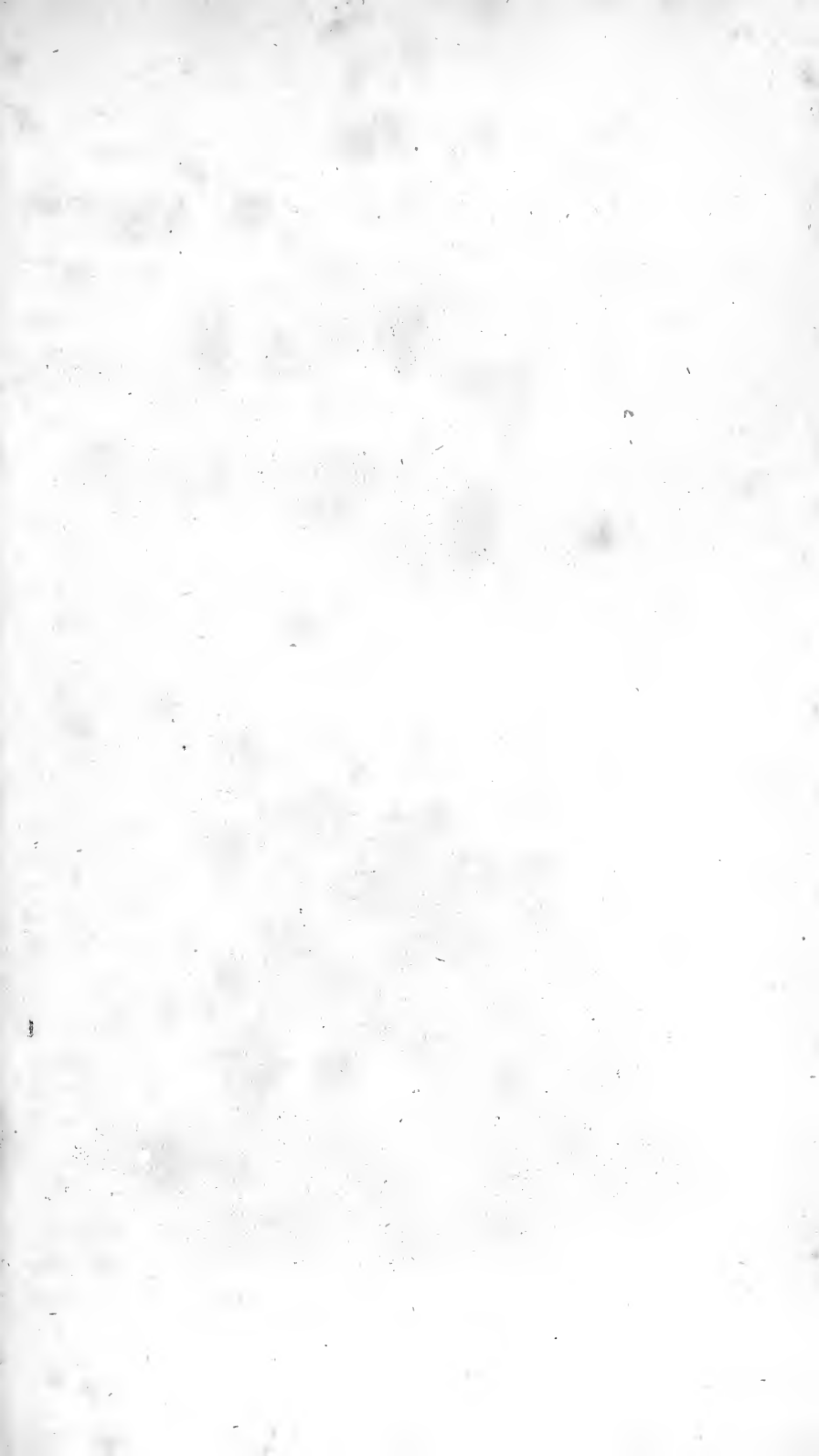
#### BRASILIAN WEASEL, OR COATI-MONDI.

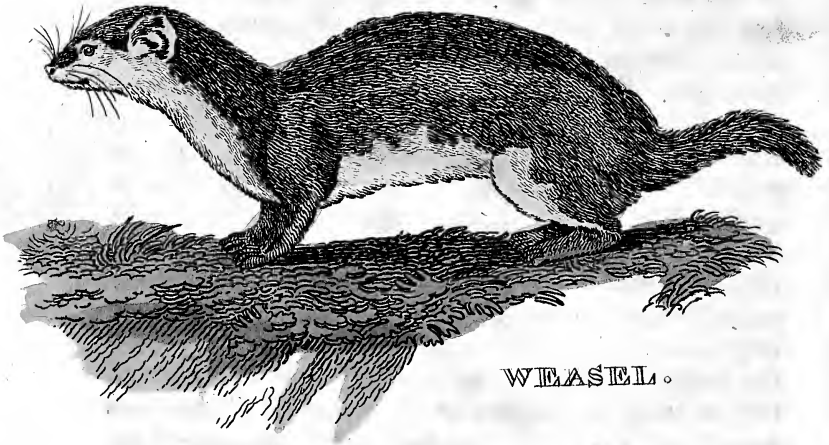
THE Brazilian weasel has the upper jaw lengthened into a pliant, moveable proboscis ; it is much longer than the lower jaw. Its ears are round, its eyes small, its nose dusky ; its hair is of a bright bay colour, and is smooth, soft, and glossy. Its tail is annulated with dusky and bay. It has a whitish breast. Its body measures eighteen inches, its tail thirteen. It is about the size of a cat. It will sometimes gnaw its own tail in sport.

The dusky Brazilian weasel is a variety of the former. Its nose and ears are formed like those of the preceding ; but beneath each eye it has two spots of white ; the hair on its back and sides is dusky at the roots, black in the middle, and tipped with yellow. Its chin and throat, the sides of its cheeks, and its belly, are yellowish ; its feet are black, and its tail is annulated with black and white. Sometimes the tail is of an uniform dusky colour. Linnæus has described the variety with the tail of a uniform dusky colour, as a distinct species.

#### FASCIATED WEASEL.

“ THIS,” says Mons. Sonnerat, “ measures two feet from the head to the tail, which is nine inches





WEASEL.



MALACCA WEASEL.



long ; it has two cutting teeth in each jaw ; those of the inferior being the strongest ; sixteen canine teeth in each jaw ; five toes on each foot, with strong crooked claws ; body long, covered with even and close hair ; legs short ; tail slender, almost as long as the body ; and ending in a point, like that of a cat ; it is marked with black and reddish hairs, which are longer than those of the body. This creature is of a grey colour, tinged with reddish at the lower part of the head, neck, legs, and feet ; the belly is white. On the body are six bands of black, four of which are straight, beginning at the back of the head, and going along the body to the tail, where they terminate ; the two others, which are on each side the body, are waved, as it were ; they begin at the shoulders, and terminate by rounding off on the hind parts ; and beneath their termination is a smaller bifid one over the thigh. The eyes are lively, and of a yellow colour, with a cast of red ; the pupil, in some views, appearing oblong. This species is a native of India, and was first described and figured by Mons. Sonnerat.

## MALACCA WEASEL.

THIS is a native of Malacca, and one of those animals which we owe to the assiduity of Mons. Sonnerat. He says it is of the size of a domestic cat, and that it has the same character and manners. The whole animal is of a pearl grey, deepest on the upper parts ; the snout is longish ; the ears small and round, and the limbs short ; the claws five in number, weak, crooked, and retractile. The top of the head is black ; and it has four round black spots above each eye, situated longitudinally ; their eyes are small and black, the pupils, in some views, oblong. Over the neck run

three longitudinal black bands, commencing behind the head, and terminating at the shoulders ; and three other bands commence over the loins, and terminate at the tail ; there is also another band running along the middle of the belly. On each side the belly and thighs are thirty round black spots, symmetrically arranged in rows, viz. three rows on each side, and one over the back ; the tail, which is longer than the body, is marked with a great many alternate black and grey circles. From the above description, as well as from Sonnerat's figure, it appears that this animal is much allied to the genet and the fossane. Mons. Sonnerat tells us it lives by chace ; and is very nimble in mounting trees, &c. It is a fierce creature, and if only wounded when shot at, will turn back and attack the aggressor. It diffuses a powerful musky odour, which is owing to a peculiar receptacle like that of the civet cat, and some others of this genus. The Malays collect the fluid thus secreted, and pretend that it is stimulant and stomachic. It is much esteemed for these qualities by the Chinese, who purchase it of the Malays.

#### TOUAN.

THIS is a very small species, less than the common weasel, and is a native of Cayenne, living in hollow trees, and feeding on worms and insects. The upper part of the snout, the head, and the whole body, as far as the tail, is blackish ; the sides of the body and limbs, bright ferruginous ; and the lower parts, from throat to tail, white ; the tail towards the tip is bare.

## QUIQUI.

THIS species inhabits Chili, living under-ground and feeding on mice, &c. It is principally distinguished by its cuneiform or wedge-shaped snout; the ears are short and round, with a white spot in the middle, the legs and tail short, like those of a lizard: the length of the animal from nose to tail is thirteen inches.

## CUJA.

THIS animal is said by Molina to have a great resemblance, in shape, manners, and teeth, to a ferret; but has black hair and eyes, and a turn-up snout; the tail is as long as the body, and very full of hair. It is a native of Chili, and preys on mice. It breeds twice a year, and has three or four young at a time.

## SPOTTED WEASEL.

THIS, which is described in Governor Phillips' Voyage to Botany Bay, is said to be of the size of a large polecat, measuring eighteen inches from nose to tail, and the tail nearly as much; the visage is of a pointed shape, and the form of the whole animal such as not ill to resemble that of the fossane. The colour is said to be black, marked all over, the tail not excepted, with irregular blotches of white; the tail is represented as thin, and gradually tapering to the end; the whiskers very long, and the general appearance of the animal such as to resemble the viverrine opossum in most particulars, except in the appearance of the tail.

## BLOTCHED, OR TIGERINE WEASEL.

THE blotched weasel takes its name from the irregular spots of deep brown scattered on its sides, legs, and thighs, which are of a yellowish white ; it has a round head, a short nose, pointed ears, and white whiskers ; its nose and cheeks are of a yellowish white, with a round black spot on each side of the nose and a dusky line down the middle of the forehead ; its back, and the outside of its limbs, are of a reddish brown ; its tail is of the same colour, as long as the body, and marked spirally near the end with black.

## ERMINE, OR STOAT.

THE stoat, or ermine, has a great resemblance to the weasel, but differs from it in size, being usually nine inches long ; whereas the weasel is not much above six. The tail of the ermine is always tipped with black, and is longer in proportion to the body, and furnished with hair. The edges of the ears and the ends of the toes in this animal are of a yellowish white ; and although it is of the same colour with the weasel, being of a lightish brown, and though both this animal, as well as the weasel, in the most northern parts of Europe changes its colour in winter, and becomes white, yet even then the weasel may be easily distinguished from the ermine by the tip of the tail, which in the latter is always black.

It is well known that the fur of the ermine is the most valuable of any hitherto known ; and it is in winter only that this little animal has it of the proper colour and consistence. In summer, the ermine, as was said before, is brown, and it

may at that time more properly be called the stoat. There are few so unacquainted with quadrupeds as not to perceive this change of colour in the hair, which in some degree obtains in them all. The horse, the cow, and the goat, all manifestly change colour in the beginning of summer, the old long hair falling off, and a shorter coat of hair appearing in its room, generally of a darker colour, and yet more glossy. What obtains in our temperate climate, is seen to prevail still more strongly in those regions where the winters are long and severe, and the summers short, and yet generally hot in an extreme degree. The animal has strength enough during that season to throw off a warm coat of fur, which would but incommode it, and continues for two or three months in a state somewhat resembling the ordinary quadrupeds of the milder climates. At the approach of winter, however, the cold increasing, the coat of hair seems to thicken in proportion; from being coarse and short, it lengthens and grows finer, while multitudes of smaller hairs grow up between the longer, thicken the coat, and give it all that warmth and softness which are so much valued in the furs of the Northern animals.

The ermine is remarkable for the softness, the closeness, and the warmth of its fur. It is brown in summer, like the weasel, and changes colour before the winter is begun, becoming a beautiful cream colour, all except the tip of the tail, which still continues black. Mr. Daubenton had one of these brought him with its white winter fur, which he put into a cage and kept, in order to observe the manner of moulting its hair. He received it in the beginning of March: in a very short time it began to shed its coat, and a mixture of brown was seen to prevail among the white, so that at the ninth of the same month its head was nearly

become of a reddish brown. Day after day this colour appeared to extend, at first along the neck and down the back, in the manner of a stripe of about half an inch broad. The fore part of the legs then assumed the same colour ; a part of the head, the thighs, and the tail, were the last that changed ; but at the end of the month there was no white remaining, except on those parts which are always white in this species, particularly the throat and the belly. However, he had not the pleasure of seeing this animal resume its former whiteness, although he kept it for above two years ; which, without doubt, was owing to its imprisoned state ; this colour being perhaps partly owing to its stinted food, and partly to the rigour of the season. During its state of confinement, this little animal always continued very wild and untractable ; for ever in a state of violent agitation, except when asleep, which it often continued for three parts of the day. Except for its most disagreeable scent, it was an extremely pretty creature, its eyes sprightly, its physiognomy pleasant, and its motions so swift that the eye could scarce attend them. It was fed with eggs and flesh, but it always let them putrefy before it touched either. As some of this kind are known to be fond of honey, it was tried to feed this animal with such food for a while ; after having for three or four days deprived it of other food, it ate of this, and died shortly after ; a strong proof of its being a distinct species from the polecat or marten, who feed upon honey, but otherwise pretty much resemble the ermine in their figure and dispositions.

In the North of Europe and Siberia their skins make a valuable article of commerce, and they are found there much more frequently than among us. In Siberia they burrow in the fields, and are

taken in traps baited with flesh. In Norway they are either shot with blunt arrows, or taken in traps made of two flat stones, one being propped with a stick, to which is fastened a baited string, and when the animals attempt to pull this away, the stone drops and crushes them to death.

This animal is sometimes found white in Great Britain, and is then called a white weasel. Its furs, however, among us are of no value, having neither the thickness, the closeness, nor the whiteness of those which come from Siberia. The fur of the ermine, in every country, changes by time ; for as much of its beautiful whiteness is given it by certain arts known to the furriers, so its natural colour returns, and its former whiteness can never be restored again.

### FERRET.

THE ferret is a kind of domestic in Europe, though said to be originally brought from Africa into Spain, which being a country abounding in rabbits, required an animal of this kind more than any other ; however this be, it is not to be found at present among us, except in its domestic state ; and it is chiefly kept tame for the purposes of the warren.

The ferret is about one foot long, being nearly four inches longer than the weasel. It resembles that animal in the slenderness of its body, and the shortness of its legs ; but its nose is sharper, and its body more slender in proportion to its length. The ferret is commonly of a cream colour ; but they are also found of all the colours of the weasel kind ; white, blackish, brown, and parti-coloured. Those that are of the whitish kind, have their eyes red, as is almost general with all animals entirely of that colour. But its principal distinction from

the weasel, is the length of the hair on its tail, which is much longer in the ferret than in the weasel.

As this animal is a native of the torrid zone, so it cannot bear the rigours of our climate without care and shelter ; and it generally repays the trouble of its keeping, by its great agility in the warren. It is naturally such an enemy of the rabbit kind, that if a dead rabbit be presented to a young ferret, although it has never seen one before, it instantly attacks and bites it with an appearance of rapacity. If the rabbit be living, the ferret is still more eager, seizes it by the neck, winds itself round it, and continues to suck its blood, till it be satiated.

Their chief use in warrens is to enter the holes, and drive the rabbits into a net prepared for them at the mouth. For this purpose, the ferret is muzzled ; otherwise, instead of driving out the rabbit, it would content itself with killing and sucking its blood at the bottom of the hole ; but, by this contrivance, being rendered unable to seize its prey, the rabbit escapes from its claws, and instantly makes to the mouth of the hole with such precipitation, that it is inextricably entangled in the net placed there for its reception. It often happens, however, that the ferret disengages itself of its muzzle, and then it is most commonly lost, unless it be dug out ; for, finding all its wants satisfied in the warren, it never thinks of returning to the owner, but continues to lead a rapacious solitary life while the summer continues, and dies with the cold of the winter. In order to bring the ferret from his hole, the owners often burn straw and other substances at the mouth ; they also beat above to terrify it ; but this does not always succeed ; for as there are often several issues to each hole, the ferret is affected neither by the noise nor the smoke, but continues secure at



the bottom, sleeping the greatest part of the time, and waking only to satisfy the calls of hunger.

They are usually kept in boxes, with wool, of which they make themselves a warm bed, that serves to defend them from the rigour of the climate. They sleep almost continually; and the instant they awake, they seem eager for food. They are usually fed with bread and milk. They breed twice a year. Some of them devour their young as soon as brought forth, and then become fit for the male again. Their number is usually from five to six at a litter; and this is said to consist of more females than males. Upon the whole, this is an useful, but a disagreeable and offensive animal: its scent is fetid, its nature voracious, it is tame without any attachment, and such is its appetite for blood, that it has been known to attack and kill children in the cradle. It is very easy to be irritated; and, although at all times its smell is very offensive, it then is much more so; and its bite is very difficult of cure.

### POLECAT.

THE polecat is larger than the weasel, the ermine, or the ferret, being one foot five inches long; whereas, the weasel is but six inches, the ermine nine, and the ferret eleven inches. It so much resembles the ferret in form, that some have been of opinion they were one and the same animal; nevertheless, there are a sufficient number of distinctions between them; it is, in the first place, larger than the ferret; it is not quite so slender, and has a blunter nose; it differs also internally, having but fourteen ribs, whereas the ferret has fifteen; and wants one of the breast bones, which is found in the ferret; however, warreners assert, that the polecat will mix with the ferret; and

they are sometimes obliged to procure an intercourse between these two animals, to improve the breed of the latter, which, by long confinement, is sometimes seen to abate of its rapacious disposition.

However this be, the polecat seems by much the more pleasing animal of the two ; for although the long slender shape of all these vermin tribes gives them a very disagreeable appearance, yet the softness and colour of the hair in some of them atones for the defect, and renders them, if not pretty, at least not frightful. The polecat, for the most part, is of a deep chocolate colour ; it is white about the mouth ; the ears are short, rounded, and tipped with white ; a little beyond the corners of the mouth, a stripe begins, which runs backward, partly white and partly yellow.

It is very destructive to young game of all kinds ; but the rabbit seems to be its favourite prey ; a single polecat is often sufficient to destroy a whole warren ; for, with that insatiable thirst for blood which is natural to all the weasel kind, it kills much more than it can devour ; and I have seen twenty rabbits at a time taken out dead, which they had destroyed, and that by a wound which was hardly perceptible. Their size, however, which is so much larger than the weasel, renders their retreats near houses much more precarious ; although I have seen them burrow near a village, so as scarcely to be extirpated. But, in general, they reside in woods or thick brakes, making holes under ground of about two yards deep, commonly ending among the roots of large trees, for greater security. In winter they frequent houses, and make a common practice of robbing the hen-roost and the dairy.

The polecat is particularly destructive among pigeons, when it gets into a dove-house ; without

making so much noise as the weasel, it does a great deal more mischief ; it dispatches with a single wound in the head ; and, after killing a great number, and satiating itself with their blood, it then begins to think of carrying them home. This it carefully performs, going and returning, and bringing them one by one to its hole ; but if it should happen that the opening by which it got into the dove-house be not large enough for the body of the pigeon to get through, this mischievous creature contents itself with carrying away the heads, and makes a most delicious feast on the brains.

It is not less fond of honey ; attacking the hives in winter, and forcing the bees away. It does not remove far from houses in winter, as its prey is not so easily found in the woods during that season. The female brings forth her young in summer, to the number of five or six at a time ; these she soon trains to her own rapacious habits, supplying the want of milk, which no carnivorous quadruped has in plenty, with the blood of such animals as she happens to seize.

The fur of this animal is considered as soft and warm ; yet it is in less estimation than some of a much inferior kind, from its offensive smell, which can never be wholly removed or suppressed. The polecat seems to be an inhabitant of the temperate climates, scarce any being found towards the North, and but very few in the warmer latitudes. The species appear to be confined in Europe, from Poland to Italy. It is certain that these animals are afraid of the cold, as they are often seen to come into houses in winter, and as their tracks are never found in the snow near their retreats. It is probable also, that they are afraid of heat, as they are but thinly scattered in the Southern climates.

## MARTEN.

THE marten is a larger animal than any of the former, being generally eighteen inches long, and the tail ten more. It differs from the polecat, in being about four or five inches longer ; its tail also is longer in proportion, and more bushy at the end ; its nose is flatter ; its cry is sharper and more piercing ; its colours are more elegant ; and, what still adds to their beauty, its scent is very unlike the former, instead of being offensive, is considered as a most pleasing perfume. The marten, in short, is the most beautiful of all British beasts of prey ; its head is small, and elegantly formed ; its eyes lively ; its ears are broad, round and open ; its back, its sides, and tail, are covered with a fine thick downy fur, with longer hair intermixed ; the roots are ash colour, the middle of a bright chestnut, the points black ; the head is brown, with a slight cast of red ; the legs and upper sides of the feet are of a chocolate colour ; the palms, or undersides, are covered with a thick down, like that of the body ; the feet are broad ; the claws white, large, and sharp, well adapted for the purposes of climbing ; but, like others of the weasel kind, incapable of being sheathed or unsheathed at pleasure ; the throat and breast are white ; the belly of the same colour with the back, but rather paler ; the hair on the tail is very long, especially at the end, where it appears much thicker than near the insertion.

Of all animals of the weasel kind, the marten is the most pleasing ; all its motions show great grace as well as agility ; and there is scarce an animal in our woods that will venture to oppose it. The instant the marten finds itself pursued by dogs, for which purpose there is a peculiar breed

that seem fit for this chase only, it immediately makes to its retreat, which is generally in the hollow of some tree, towards the top, and which it is impossible to come at without cutting it down.

These animals are found in all the Northern parts of the world, from Siberia to China and Canada. In every country they are hunted for their furs, which are very valuable, and chiefly so when taken in the beginning of winter. The most esteemed part of the marten's skin is that part of it which is browner than the rest, and stretches along the back bone. Above twelve thousand of these skins are annually imported into England from Hudson's bay, and above thirty thousand from Canada.

## SABLE.

THE sable is a native of North America, Siberia, Kamtschatka, and Asiatic Russia. It is about eighteen inches in length ; and has a longish and rather sharpened head. Its general colour is a deep glossy brown.

The skin of the sable is more valuable than that of any other animal. One of these, not above four inches broad, has sometimes been valued as high as fifteen pounds ; but the general price is from one pound to ten, according to their quality. The sable's fur is different from all others, in the hair turning with equal ease either way. The bellies of sables, which are sold in pairs, are about two fingers in breadth ; and are tied together in bundles of forty pieces, which are sold at from one to two pounds a bundle. The tails are sold by the hundred, at from four to eight pounds.

The manner in which the natives of Kamtschatka take these animals is very simple. They follow

the track of the sable, in snow shoes, till they have detected his covert, which is generally a burrow in the earth. As soon as the little creature is aware of his pursuers, he escapes into some hollow tree ; which the hunters surround with a net, and then either cut it entirely down, or force the animal by fire and smoke to abandon his retreat, when he falls into the net and is killed. They sometimes surround the tree in which a sable is lodged, with dogs trained for the purpose ; and then, making a running noose on a pretty strong cord, find means to get the creature's head into the snare, and thus haul him down an easy prey.

In other parts, where these animals are less common, the contrivances to take them are more artificial. Of this kind is the sable-trap of the Vogules, which is used in several parts of Siberia :—a place is found where two young trees stand not far asunder. These are immediately stripped of their branches about the bottom ; and near one of them a post is stuck into the ground, on which a beam is placed horizontally, so fastened to both trees, that one end of it lies between the post and the tree. Over this beam another is laid, as a trap-fall ; at the end of which a thin support is put, which, when the trap-fall is up, stands over the notched end of the post. At the extremity of the support is a mat-string, and another at the lower transverse beam, tied very short. Both are brought together ; and a stick is put through them, having at its lower extremity a piece of flesh or wild fowl attached, which, by its preponderance, keeps the stick down, and thus holds the two strings together. The sable creeps cautiously along the lower beam, till he can reach the bait, and pull it to him ; this looses the stick to which the bait is tied, and by which the strings were held together ; the stay slips

its hold, and consequently the upper beam falls upon the shoulders of the animal, and holds him fast.

Sables frequent the banks of rivers, and the thickest parts of the woods. They live in holes under ground, and especially under the roots of trees; but they sometimes make their nest (consisting of moss, small twigs, and grass) in the hollows of trees. The female brings forth in the spring, and produces from three to five at a time. In winter they live on berries of different kinds; but in the summer time, before these are ripe, they devour hares, weasels, ermines, and other small animals.

The sable is a lively and active animal; and leaps with great agility from tree to tree, in pursuit of birds or squirrels. It is said to feed also on wild fruits and berries. M. Gmelin saw two of these animals that had been in some measure domesticated. Whenever they saw a cat, they would rise on their hind feet to prepare for a combat. In the night, they were extremely restless and active; but during the day, and particularly after eating, they generally slept so sound for half an hour, or an hour, that they might be pushed, shaken, and even pricked, without being awakened.

The chase of the sable, according to Mr. Penant, was, during the more barbarous periods of the Russian empire, the principal task of the unhappy exiles who were banished into Siberia; and who, as well as the soldiers sent there, were obliged to furnish, within a given time, a certain quantity of furs; but as Siberia is now become more populous, the sables have, in a great measure, quitted it, and retired farther to the north and east, into the desert forests and mountains.

## COMMON WEASEL.

This is an active little animal, well known in our own country. Its length, exclusive of the tail, is about seven inches ; and its height, not above two and a half. The colour of its upper parts is a pale reddish brown ; and its breast and belly are white ; but on each side, below the corners of the mouth, is a brown spot. The ears are small and rounded, and the eyes black.

It is very destructive to young birds, poultry, rabbits, and several other animals ; and it sucks eggs with great avidity. In this latter operation, it begins by making a small hole at one end, from which it licks out the yolk, leaving the shell behind ; whereas rats and some other animals, always drag the egg out of the nest, and either make a large hole in it, or break it to pieces. By this circumstance the attacks of the weasel may always be distinguished.

Its form is elegant, but, like some others of this genus, it has an unpleasant smell. It lives chiefly in cavities under the roots of trees, and in the banks of rivulets ; from whence it sallies out on the approach of evening, to commit its devastations.

M. de Buffon supposed the weasel to be untamable ; but Mademoiselle de Laistre, in a letter on this subject, gives a very pleasing account of the education and manners of a weasel which she took under her protection. This she fed with fresh meat and milk, the latter of which it was very fond of. It frequently ate from her hand, and seemed to be more delighted with this manner of feeding than any other.

"If I pour," says this lady, "some milk into my hand, it will drink a good deal ; but if I do not pay it this compliment, it will scarcely take



a drop. When it is satisfied, it generally goes to sleep. My chamber is the place of its residence ; and I have found a method of dispelling its strong smell by perfumes. By day it sleeps in a quilt, into which it gets by an unsown place which it had discovered on the edge ; during the night, it is kept in a wired box or cage, which it always enters with reluctance, and leaves with pleasure. If it be set at liberty before my time of rising, after a thousand little playful tricks, it gets into my bed, and goes to sleep in my hand, or on my bosom. If I am up first, it spends a full half hour in caressing me ; playing with my fingers like a little dog, jumping on my head and on my neck, and running round on my arms and body with a lightness and elegance which I never found in any other animal. If I present my hands at the distance of three feet, it jumps into them without ever missing. It shews a great deal of address and cunning in order to compass its ends, and seems to disobey certain prohibitions, merely through caprice. During all its actions, it seems solicitous to divert, and to be noticed ; looking at every jump, and at every turn, to see whether it is observed or not. If no notice be taken of its gambols, it ceases them immediately, and betakes itself to sleep ; and even when awaked from the soundest sleep, it instantly resumes its gaiety, and frolics about in as sprightly a manner as before. It never shews any ill-humour, unless when confined, or teased too much ; in which case, it expresses its displeasure by a sort of murmur, very different from that which it utters when pleased.

“ In the midst of twenty people, this little animal distinguishes my voice, seeks me out, and springs over every body to come at me. His play with me is the most lively and caressing ; with his two little paws he pats me on the chin, with an air

and manner expressive of delight. This, and a thousand other preferences, shew that his attachment to me is real. When he sees me dressed for going out, he will not leave me, and it is not without some trouble that I can disengage myself from him ; he then hides himself behind a cabinet near the door, and jumps upon me as I pass, with so much celerity that I often can scarcely perceive him.

“ He seems to resemble a squirrel in vivacity, agility, voice, and his manner of murmuring. During the summer, he squeaks and runs about all night long ; but since the commencement of the cold weather, I have not observed this. Sometimes, when the sun shines while he is playing on the bed, he turns and tumbles about, and murmurs for a while.

“ From his delight in drinking milk out of my hand, into which I pour a very little at a time, and his custom of sipping the little drops and edges of the fluid, it seems probable that he drinks dew in the same manner. He very seldom drinks water, and then only for want of milk ; and with great caution, seeming only to refresh his tongue once or twice, and to be even afraid of that fluid. During the hot weather, it rained a good deal. I presented to him some rain water in a dish, and endeavoured to make him go into it, but could not succeed. I then wetted a piece of linen cloth in it, and put it near him ; when he rolled upon it with extreme delight.

“ One singularity in this charming animal is his curiosity ; it being impossible to open a drawer or a box, or even to look at a paper, but he will examine it also. If he gets into any place where I am afraid of permitting him to stay, I take a paper or a book, and look attentively at it ; when he immediately runs upon my hand, and surveys with an

inquisitive air whatever I happen to hold. I must further observe, that he plays with a young cat and dog, both of some size ; getting about their necks, backs, and paws, without their doing him the least injury."

The motion of the weasel consists of unequal leaps ; and, on occasion it has the power of springing some feet from the ground. It is remarkably active ; and will run up a wall with such facility, that no place is secure from it. It is useful to the farmer in ridding him of rats and mice, which it will pursue into their holes, and there kill ; but its depredations are not altogether confined to these pernicious animals, as it also very frequently destroys young poultry and pigeons. It seizes its prey near the head ; and but seldom eats it upon the spot, generally carrying it away to its retreat. It often destroys the moles in their habitations ; as is proved by its being at times caught in the traps laid for those animals. We are told that when it pursues the hare, that timid creature is terrified into a state of absolute imbecility, and gives up itself without the least resistance, making, at the same time, the most piteous outcries.

A story is related, that an eagle, having seized a weasel, mounted into the air with it, and was soon after observed to be in great distress. His little enemy had so far extricated itself, as to be able to bite him very severely in the neck ; which presently brought the bird to the ground, and gave the weasel an opportunity of escaping.

## FISHER.

THIS species, notwithstanding its name, is not amphibious. It has a black nose ; strong and stiff whiskers ; six small weasel-like teeth above and below ; it has six large canine teeth ; four

grinding teeth in each upper jaw ; three of these are sharp-pointed, the fourth flat ; in the lower jaw six ; - the last flatted, the next with three points, the next to those with two. Its ears are round, dusky on their outsides, but edged with white ; its face and the sides of its neck are of a pale brown, or ash colour, mixed with black ; its back, belly, legs, and tail, are black ; but the roots of the hair are brown ; its sides are brown ; its feet very broad, covered with hair even on their soles ; it has five toes on the fore feet ; on the hind feet generally four, but sometimes five, with sharp, strong, and crooked white claws ; its fore feet are longer than those behind ; its tail is full and bushy, smallest at the end, seventeen inches long. The length of the animal itself is twenty-eight inches.

It inhabits North America ; above five hundred skins are brought in a season from New York and Pennsylvania. Many of these vary in colour.

#### GALLERA, OR MADAGASCAR WEASEL.

THIS species is the vansire of Buffon. It has short ears. The hair on its whole body is brown at the roots, and barred above with black and a rust colour ; as is also the tail, which is near ten inches long.

The animal itself is about fourteen inches in length ; it inhabits Madagascar, whence it has its name.

#### PEKAN WEASEL.

THE pekan has very long and strong whiskers, and his ears are a little pointed. The hair on his head, back, and belly, is cinereous at the roots, of a bright bay at the ends, and is very soft and

## WHITE-CHEEKED, AND GRISON WEASEL. 381

glossy ; there is a tinge of grey on the sides, and between the fore legs a white spot ; the legs and tail are black ; its toes, armed with sharp claws, are covered with thick hair, both above and below. In form it resembles the marten. Its length is one foot seven inches ; the length of its tail about eleven. It is an inhabitant of North America. It has somewhat the appearance of the otter tribe.

### WHITE-CHEEKED WEASEL.

MR. PENNANT described this species from a living animal at London, in 1774, but could not learn which was its native country. It had rounded ears ; a broad and blunt nose ; dusky irides, and a flat head. Its face, crown, legs, rump, and tail, were black ; its chin and cheeks white ; its throat of a rich yellow ; its back and belly were of a pale yellow, intimately mixed with ash colour. Its body was eighteen inches long ; its tail was of the same length, covered with long hair.

### GRISON WEASEL.

THIS species has a large head and eyes, and short, but broad ears. The upper part of its body is of a deep brown, each hair being tipped with white, which gives it a hoary look. From each side of the forehead extends a broad white line, passing over the eyes, and reaching as far as the shoulders ; its nose, throat, and the whole underside of its body, its thighs and legs, are black. Its length seven inches ; its tail is a little more than half the length of the body. It inhabits Surinam ; but is a very scarce animal.

## GUIANA WEASEL.

THIS is the *mustela barbara* of Linnæus. It has round ears covered with down, an ash coloured space between its eyes, and a trilobated spot on the lower part of its neck. It is of a black colour, of the size of a marten ; its hair is coarse. It inhabits Brasil and Guiana. When it rubs itself against the trees, it leaves an unctuous matter, that scents of musk.

## WOOLLY WEASEL.

THIS species has a long slender nose, the upper jaw longer than the lower ; very short and round ears, its body covered with woolly hair, and a tail above eight inches long, tapering to a point. Its body measures between fifteen and sixteen inches. Mr. Pennant copies Buffon in this article, at the same time that he acknowledges he has some doubts whether it be not of the same species with the former. Buffon says it inhabits Guiana.

## SARMATIAN WEASEL.

THIS species has broad, short, round ears, edged with long white hairs ; its mouth is surrounded with white ; its head, feet, and the underside of its body, are quite black ; its head is crossed beyond each eye with a white band, passing beneath the ears along the sides of the neck, and down to the throat ; from the hind part of the head another band of yellow passes on each side obliquely towards the shoulders : above is a third. The upper part of the body is of a brownish black, striped and spotted irregularly with obscure yellow ; its tail, about six inches long, is dusky, with longer

white hairs intermixed, but wholly black at the end. The animal is about fourteen inches long.

It inhabits only Poland and the southern provinces of Russia ; in Asia, the mountains of Caucasus, Georgia, and Bucharía. It is a most voracious creature, feeding on the marmots, mice, and lesser animals, where it resides. It seizes its prey, and first sucks out the blood. It lives usually in holes made by other beasts ; but is not incapable of digging a burrow for itself. It sleeps little, preys by night, and is very fierce and untameable ; its eyes are of a flaming brightness ; it is very active, and moves by frequent jumps ; its smell is very fetid, especially when it erects its tail, which it does when it is angry.

It copulates in the spring ; goes two months, and brings from four to eight young ones, according to the report of the natives.

#### SIBERIAN WEASEL.

THIS weasel has a black face, whitish about the nostrils, and spotted towards its eyes ; the rest of the animal is of a deep yellow, nearly approaching to fox or orange colour ; its throat is sometimes spotted with white ; its tail is very bushy, and of a deeper colour than the body ; its hair in general is loose and long, and the soles of its feet are deeply covered with fur ; its body is more slender than that of the polecat, and approaches nearer to the form of the stoat ; its length is about twelve inches, its tail six.

It begins to appear in the Altaic mountains, between the Oby and the Irtysh ; from whence it is common on wooded mountains, to the Amur and the lake Baikal. In its haunts, manners, and food, it has a great resemblance to the sable ; but it does not extend so far north.

## SOUTH AMERICAN FITCHET OR WEASEL.

THIS is a weasel with a long sharp nose ; its cheeks, its throat, and the sides of its neck, are black ; its forehead and the sides of its head, to its ears, are white ; its ears are short, round, and edged with white ; from each a narrow stripe extends along the sides of its neck. Its body is covered with coarse hair, grey at the base, black, and white at the ends ; its legs and feet are black tinged with red ; its toes are not unlike those of a rat. The length of the animal is above twenty-one inches ; its tail is bushy, of a bright chesnut mixed with white ; it is rather shorter in proportion than the English fitchet, to which it bears a near resemblance. It inhabits Guiana.

## GREY-HEADED WEASEL.

THIS is black, with the head and sides of the neck greyish, and the throat and under side of the neck white. It measures above two feet from nose to tail, which is eighteen inches long. It is a native of Guiana.

## MUSKY WEASEL.

THIS has the upper part of the body cinereous, dashed with yellow, and marked with some obscure dusky lines ; the nose, part of the cheeks, the legs, and end of the tail black ; on the middle of the cheeks is a white spot. It is a native of Bengal, and is said to have a strong musky scent. Size not mentioned : described by Mr. Pennant from a drawing.



## SLENDER-TOED WEASEL.

THIS is a small species, measuring from nose to tail seven inches, and the tail is of the same length ; the ears short and rounded ; the fur grizzled minutely with black and rufous ; the toes five in number, and very long and slender ; each lobated at the bottom of the first joint ; claws small ; the upper part of the toes and part of the legs covered with short velvet-like down ; the tail is bushy, and covered with long rat coloured hair. This species is described by Mr. Pennant from a drawing. It is said to be a native of Cochin China.

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OTTER TRIBE.  
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THE otters differ from the weasels, in living almost constantly in the water ; from whence they principally derive their food, which consists of fish. Their bodies are very long, and their legs short. They burrow and form their dwellings in the banks of rivers and lakes, in the neighbourhood of the situations in which they find their prey.

They have, in each jaw, six sharpish cutting teeth ; the lower ones of which do not stand in an even line with the rest, but two are placed somewhat within. The canine teeth are rather longer than the others. The animals of this tribe have all webbed feet.

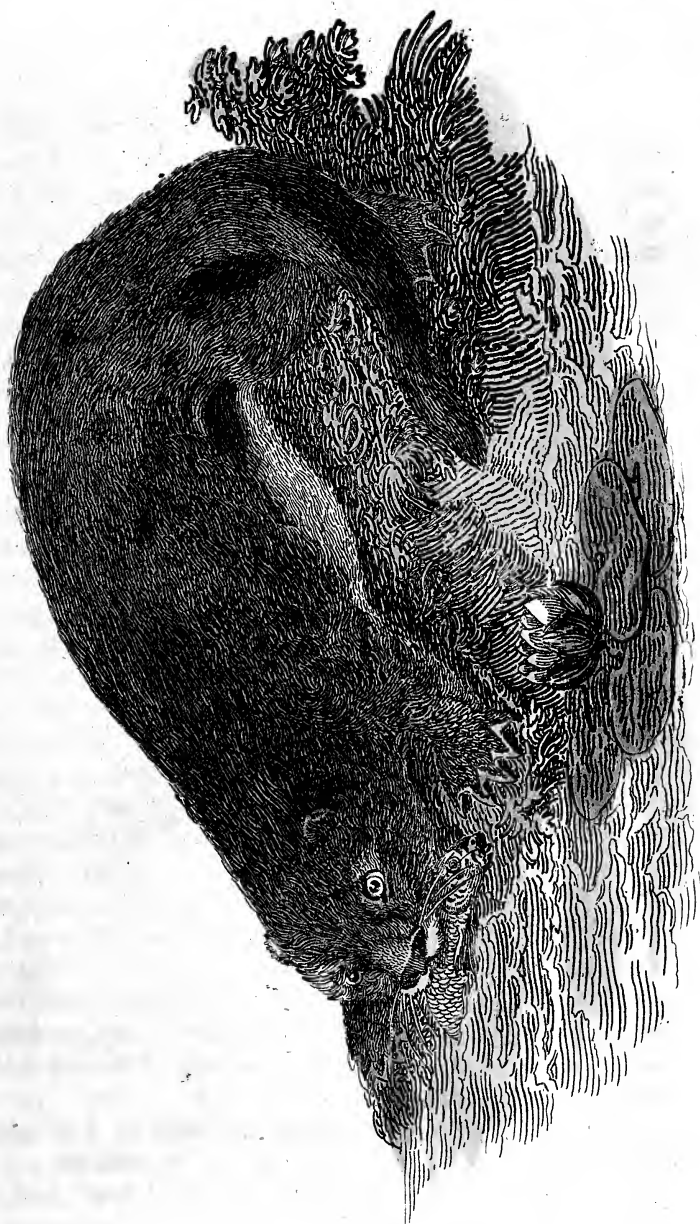
## COMMON OTTER.

THE common otter is about two feet in length, from the nose to the insertion of the tail ; and the length of the tail is nearly sixteen inches. It is a native of almost every part of Europe, and is still to be met with in some parts of England. Its legs are short, but strong and muscular. The head is broad, oval, and flat on the upper part ; and the body is long and round. The legs are so placed as to be capable of being brought into a line with the body, and of performing the office of fins. The toes are connected by webs. The general colour of these animals is a deep brown.

This voracious animal is never found but at the sides of lakes and rivers, but particularly the former, for it is seldom fond of fishing in a running stream ; for the current of the water having more power upon it than the fishes it pursues, if it hunts against the stream, it swims too slow, and if with the stream, it overshoots its prey. However, when in rivers, it is always observed to swim against the stream, and to meet the fishes it preys upon rather than to pursue them. In lakes it destroys much more than it devours, and is often seen to spoil a pond in the space of a few nights. But the damage they do by destroying fish is not so great as their tearing in pieces the nets of the fishers, which they infallibly do whenever they happen to be entangled. The instant they find themselves caught, they go to work with their teeth, and in a few minutes destroy nets of a very considerable value.

The otter has two different methods of fishing ; the one by catching its prey from the bottom upward, the other by pursuing it into some little creek, and seizing it there. In the former case,

OTTER.





as this animal has longer lungs than most other quadrupeds, upon taking in a quantity of air, it can remain for some minutes at the bottom ; and whatever fish passes over at that time is certainly taken ; for as the eyes of fish are placed so as not to see under them, the otter attacks them off their guard from below ; and, seizing them at once by the belly, drags them on shore, where it often leaves them untouched, to continue the pursuit for hours together. The other method is chiefly practised in lakes and ponds, where there is no current ; the fish thus taken are rather of the smaller kind, for the great ones will never be driven out of deep water.

In this manner, the otter usually lives during the summer, being furnished with a supply much greater than its consumption ; killing for its amusement, and infecting the edges of the lake with quantities of dead fish, which it leaves there as trophies rather of its victory than its necessities. But in winter, when the lakes are frozen over, and the rivers pour with a rapid torrent, the otter is often greatly distressed for provisions ; and is then obliged to live upon grass, weeds, and even the bark of trees. It then comes upon land, and, grown courageous from necessity, feeds upon terrestrial animals, rats, insects, and even sheep themselves. Nature, however, has given it the power of continuing a long time without food ; and although, during that season, it is not rendered quite torpid, like the marmot or the dormouse, yet it keeps much within its retreat, which is usually the hollow of a bank, worn under by the water. There it often forms a kind of gallery, running for several yards along the edge of the water ; so that when attacked at one end, it flies to the other, and often evades the pursuer by plunging into the

water at forty or fifty paces distant, while he expects to find it just before him.

We learn from M. Buffon, that this animal, in France, couples in winter, and brings forth in the beginning of spring. But it is certainly different with us, for its young are never found till the latter end of summer; and Goldsmith frequently, when a boy, discovered their retreats, and pursued them at that season. He is, therefore, more inclined to follow the account given us of this animal by Mr. Lots, of the academy of Stockholm, who assures us that it couples about the middle of summer, and brings forth at the end of nine weeks, generally three or four at a time.

In the rivers and the lakes frequented by the otter, the bottom is generally stony and uneven, with many trunks of trees, and long roots stretching underneath the water. The shore also is hollow, and scooped inward by the waves. These are the places the otter chiefly chooses for its retreat; and there is scarce a stone which does not bear the mark of its residence, as upon them its excrements are always made. It is chiefly by this mark that its lurking places are known, as well as by the quantity of dead fish that are found lying here and there upon the banks of the water. To take the old ones alive is no easy task, as they are extremely strong, and there are few dogs that will dare to encounter them. They bite with great fierceness, and never let go their hold when they have once fastened. The best way, therefore, is to shoot them at once, as they never will be thoroughly tamed; and if kept for the purposes of fishing, are always apt to take the first opportunity of escaping. But the young ones may be more easily taken, and converted to very useful purposes.

The otter brings forth its young generally under

the hollow banks, upon a bed of rushes, flags, or such weeds as the place affords it in the greatest quantities. Mr. Pennant says, that it burrows under ground, on the banks of some river or lake, and always makes the entrance of its hole under water, then works up to the surface of the earth, and there makes a minute orifice for the admission of air, and this little air hole is often found in the middle of some thicket. In some places this may be true, but Goldsmith has never observed any such contrivance ; the retreat, indeed, was always at the edge of the water, but it was only sheltered by the impending bank, and the otter itself seemed to have but a small share in its formation. But be this as it may, the young ones are always found at the edge of the water ; and, if under the protection of their dam, she teaches them instantly to plunge, like herself, into the deep, and escape among the rushes or weeds that fringe the stream. At such times, therefore, it is very difficult to take them ; for, though never so young, they swim with great rapidity, and in such a manner, that no part of them is seen above water, except the tip of the nose. It is only when the dam is absent that they can be taken ; and, in some places, there are dogs purposely trained for discovering their retreats. Whenever the dog comes to the place, he soon, by his barking, shews that the otter is there ; which, if there be an old one, instantly plunges into the water, and the young all follow. But, if the old one be absent, they continue terrified, and will not venture forth but under her guidance and protection. In this manner they are secured, and taken home alive, where they are carefully fed with small fish and water. In proportion, however, as they gather strength, they have milk mixed among their food, the quantity of their fish provision is retrenched, and that of vegetables is

increased, until at length, they are fed wholly upon bread, which perfectly agrees with their constitution. The manner of training them up to hunt for fish requires not only assiduity, but patience ; however, their activity and use, when taught, greatly repays the trouble of teaching ; and, perhaps, no other animal is more beneficial to his master. The usual way, is, first to learn them to fetch as dogs are instructed ; but, as they have not the same docility, so it requires more art and experience to teach them. It is commonly performed by accustoming them to take a truss stuffed with wool, of the shape of a fish, and made of leather, in their mouths, and to drop it at the word of command ; to run after it when thrown forward, and to bring it to their master. From this they proceed to real fish, which are thrown dead into the water, and which they are taught to fetch from thence. From the dead they proceed to the live, until at last the animal is perfectly instructed in the whole art of fishing. An otter thus taught is a very valuable animal, and will catch fish enough to sustain not only itself, but a whole family. Goldsmith saw one of these go to a gentleman's pond at the word of command, drive up the fish into a corner, and seizing upon the largest of the whole, bring it off, in its mouth, to its master.

In some parts of North America, otters are seen in winter at a distance from any apparent open water, both in woods and on plains ; but it is not known what leads them to such situations. If pursued, when among the woods where the snow is light and deep, they immediately dive, and make considerable way under it ; but they are easily traced by the motion of the snow above them, and soon overtaken. The Indians kill numbers of them with clubs, by tracking them in the snow ; but some of the old ones are so fierce, when closely



pressed, that they turn upon and fly at their pursuers.

They are very fond of play ; and one of their favourite pastimes is, to get on a high ridge of snow, bend their fore feet backward, and slide down the side of it, sometimes to the distance of twenty yards.

A person of the name of Collins, who lived at Kilmerston, near Wooler, in Northumberland, had a tame otter, which followed him wherever he went. He frequently took it to fish in the river ; and when satiated, it never failed to return to its master. One day, in the absence of Collins, the otter being taken out to fish by his son, instead of returning as usual, refused to come at the accustomed call, and was lost. The father tried every means to recover it ; and after several days search, being near the place where his son had lost it, and calling it by its name, to his inexpressible joy it came creeping to his feet, and shewing many marks of affection and firm attachment.

Some years ago, James Campbell, near Inverness, had a young otter, which he brought up and tamed. It would follow him whenever he chose ; and if called on by its name, would immediately obey. When apprehensive of danger from dogs, it sought the protection of its master, and would endeavour to spring into his arms for greater security. It was frequently employed in catching fish, and would sometimes take eight or ten salmon in a day. If not prevented, it always made an attempt to break the fish behind the fin next the tail ; and, as soon as one was taken away, it immediately dived in pursuit of more. When tired, it would refuse to fish any longer ; and was then rewarded with as much as it could devour. Having satisfied its appetite, it always coiled itself round, and fell asleep ; in which state it was generally carried home.

The same otter fished as well in the sea as in fresh water, and took great numbers of young cod and other fish there.

Another person who kept a tame otter, suffered it to follow him with his dogs. It was very useful to him in fishing ; by going into the water, and driving trout, and other fish towards the net. It was remarkable, that dogs accustomed to otter hunting, were so far from giving it the least molestation, that they would not even hunt any otter while this remained with them ; on which account the owner was under the necessity of disposing of it.

An instance has been known of an otter being brought up in a house, and when it was shewed the water, manifesting a fear of that element.

In the northern parts of America, these animals change their colour in winter to white, like most of the other arctic animals ; and it is not till very late in the spring that they resume their brown summer dress.

The flesh is exceedingly rank and fishy ; so much so, that the Romish Church permitted the use of it on maigre-days. In the kitchen of the Carthusian convent near Dijon, Mr. Pennant saw one of them cooking for the dinner of the religious of that rigid order ; who by their rules are prohibited, during their whole lives, the eating of flesh. The Kamtschadales use the otter's fur for garments ; and the North American Indians manufacture their skins into pouches, which they ornament with bits of horn.

#### SEA OTTER.

The sea otter is found on the coast of Kamtschatka, and in the adjacent islands, as well as on the opposite coasts of America ; but it is confined

within a very few degrees of latitude. Its whole length is about four feet, of which the tail occupies thirteen inches. The fur is extremely soft, and of a deep glossy black. On the forehead is generally a greyish spot, the ears are small and erect, and the whiskers long and white. The legs are short and thick, the hinder ones somewhat resembling those of a seal. The tail is broad, and pointed at the end. The weight of the largest sea otter is from seventy to eighty pounds.

In their manners these animals are very harmless ; and towards their offspring they exhibit an uncommon degree of attachment. They will never desert them ; and will even starve themselves to death on being robbed of them, and strive to breathe their last on the spot where their young have been destroyed. The female produces only a single young one at a time, which she suckles almost a whole year, and till it takes to itself a mate. The sea otters pair, and are very constant. They often carry their young between their teeth and fondle them, frequently flinging them up and catching them again in their paws. Before these can swim, the old ones will take them in their fore feet, and swim about with them upon their backs.

The sea otters swim sometimes on their sides ; at other times on their backs, or in an upright position. They are very sportive, embrace each other, and seem to kiss. When attacked, they make no resistance, but endeavour to save themselves by flight ; if, however, they are closely pressed, and can see no means of escape, they scold and grin like an angry cat. On receiving a blow, they immediately lie on their side, draw up their hind legs together, cover their eyes with their fore paws, and thus seem to prepare themselves for death. But if they are fortunate enough to escape their pursuer, they deride him as soon as they are safe in

the sea, with various diverting tricks ; at one time keeping themselves on end in the water, and jumping over the waves, holding their fore paw over the eyes as if to shade them from the sun while looking out for their enemy ; then lying flat on their back, and stroking their belly ; then throwing their young down into the water and fetching them up again. In their escape they carry the sucklings in their mouths, and drive before them those that are full grown.

The skins of the sea otters are of great value. The flesh of the young ones is delicate eating.

#### BRASILIAN OTTER.

THE Brazilian otter has a round head like that of a cat ; it has feline teeth too ; eyes small, round, and black ; large whiskers and round ears ; feet like those of a monkey, with five toes, the inner ones the shortest, all armed with sharp claws ; its tail, which is flat and naked, reaches no further than the feet ; its hair is soft, and not long ; it is entirely black, except the head, which is dusky, and the throat, which is yellow. It is about the size of a middling dog.

It inhabits Brasil, Guiana, and the borders of the Oronoko. It lives on fish, and crustaceous animals, such as cray fish, and is very dexterous in robbing nets and weels of what it finds in them. It makes a noise like a young puppy. Its flesh is reckoned delicate eating, and does not taste fishy, notwithstanding its food. They are extremely cleanly, live in society, and go in troops ; they are fierce, and make a vigorous defence against dogs ; but when taken young, are soon tamed.

## LESSER OTTER.

THIS species is of the form of the greater otter ; but it is only one third of its size. It has roundish ears ; a white chin, and a tawny and dusky body ; the short hairs being yellowish, and the long ones black. Its feet are broad, webbed, and covered with hair ; its tail is dusky, and ends in a point. It inhabits Poland and the north of Europe ; but none of them are found beyond the lake Baikal, or in the north-east parts of Siberia. It lives on fish, frogs, and water-insects. Its fur is very valuable. It is next in beauty to that of the sable. It is caught with dogs, and in traps ; but, like the polecat, it is most excessively fetid. It is the same animal with the minx of North America. The skins are often brought over to England.

## SARICOVIENNE, OR CAYENNE OTTER.

THIS species is also web-footed, of the size of a cat, with a fur fine as velvet, grey and black ; it lives more in the water than on land ; its flesh is very delicate and fine eating. It is a native of South America.

## SLENDER OTTER.

THE length of this species, from the nose to the tip of the tail, is four feet four inches ; of the tail about thirteen inches ; the diameter of the body, so far as could be guessed from the dried skin, scarcely more than four inches and a half ; the fore legs about three inches and a half long ; the hind legs four inches. The head and eyes are small ; the hind feet more strongly webbed than the fore feet ; the colour of the whole animal a

rich and very deep chesnut, or dark brown, rather pale beneath ; the cheeks and throat paler than the other parts. This species inhabits Staten Land.

#### CHINCHIMEN.

In its general appearance this animal is said extremely to resemble a cat, having a similar head, whiskers, ears, eyes, shape, and length of tail ; the feet have five webbed toes, with strong crooked claws ; the length from nose to tail is twenty inches.

It is said by Molina to inhabit the sea of Chili. They swim about in pairs, and love to bask in the sun on the tops of rocks ; and when taken, have all the fierceness of a wild cat.

#### VISON.

THIS species differs from the lesser otter in scarcely any thing but its wanting a white throat ; instead of which it is entirely of a fine brown, with a cast of chesnut. Dr. Shaw believes it to be the true minx.

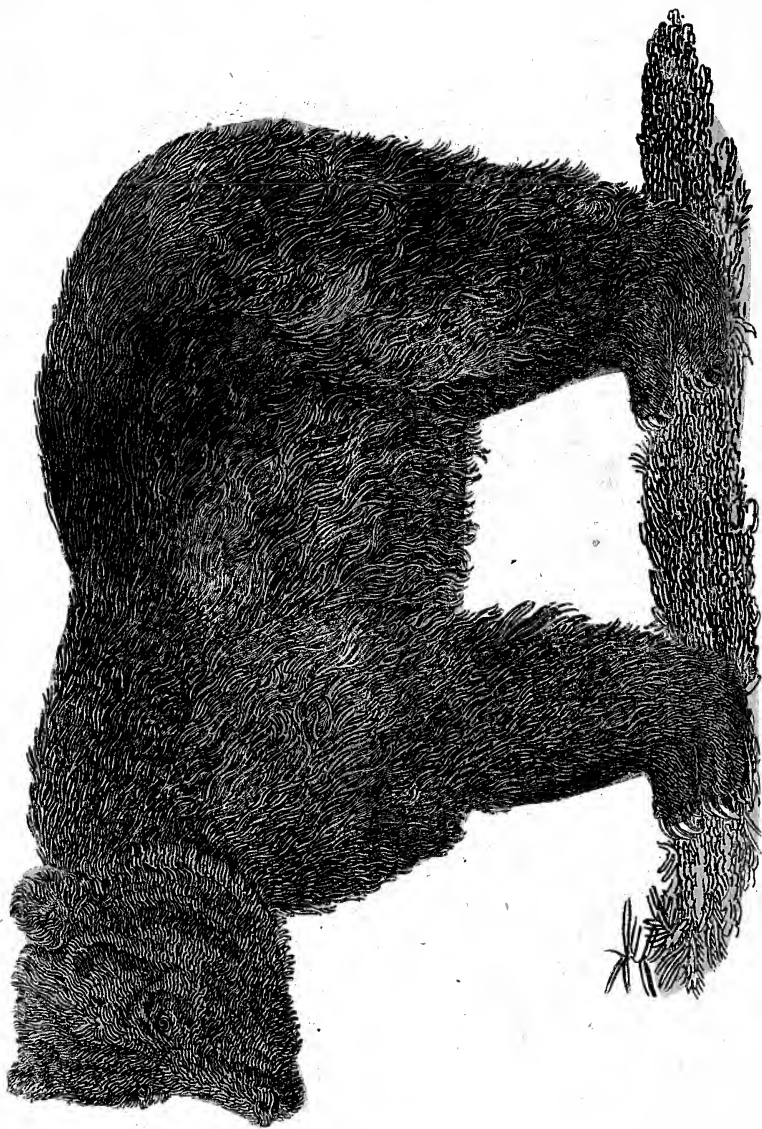
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### BEAR TRIBE.

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THE bears have six-front teeth in each jaw. The two lateral ones of the lower jaw are longer than the rest, and lobed with smaller or secondary teeth at their internal bases. There are five or six grinders on each side ; and the canine teeth are





BEAR.



solitary. The tongue is smooth, and snout prominent. The eyes are furnished with a nictitating or winking membrane.

The soles of the feet in all the animals belonging to this tribe are long, and extend to the heel, which gives them a very firm tread. Some of the species use their fore paws as hands. From the length and sharpness of their claws, they are all able to climb trees in search of prey, or to escape from their enemies.

#### COMMON BEAR.

THE common bears are inhabitants of the forests in the northern regions of Europe, and are also said to be found on some of the Indian islands. They vary much in colour : some of them being brown, others black, and others grey. The brown bears live chiefly on vegetables ; and the black ones in a great measure on animal food, on lambs, kids, and even cattle, which they destroy, sucking the blood in the manner of the weasel tribe. They generally blow up the carcasses of such animals as they kill, and hide in the marshes what they cannot devour.

They are particularly fond of honey. In search of this they climb trees, in order to get at the nests of wild bees ; for the bear, notwithstanding his awkward form, is expert in climbing, and sometimes takes up his residence in the hollow of a large tree. He will also catch and devour fish ; and occasionally frequents the banks of rivers for that purpose.

This species has a long head, small eyes, and short ears, rounded at the top. Its limbs are strong, thick, and clumsy ; its feet are large, and its tail is very short ; its body is covered with very long shaggy hair.

“ The brown bear,” says Buffon, “ is not only

savage but solitary ; he takes refuge in the most unfrequented parts, and the most dangerous precipices of uninhabited mountains. It chooses its den in the most gloomy parts of the forest, in some cavern that has been hollowed by time, or in the hollow of some old enormous tree. There it retires alone, and passes some months of the winter without provisions, or without ever stirring abroad. However this animal is not entirely deprived of sensation, like the bat or the dormouse ; but seems rather to exist upon the exuberance of its former flesh, and only feels the calls of appetite, when the fat it had acquired in summer begins to be entirely wasted away. In this manner when the bear retires to its den, to hide for the winter, it is extremely fat ; but at the end of forty or fifty days, when it comes forth to seek for fresh nourishment, it seems to have slept all its flesh away. It is a common report, that during this time they live by sucking their paws, which is a vulgar error that scarce requires confutation. These solitary animals couple in autumn, but the time of gestation with the female is still unknown ; she takes great care to provide a proper retreat for her young ; secures them in the hollow of a rock, and provides a bed of hay in the warmest part of her den ; she brings forth in winter, and the young ones begin to follow her in spring. The male and female by no means inhabit the same den ; they have each their separate retreat, and seldom are seen together, but upon the accesses of genial desire."

The voice of the bear is a kind of growl, interrupted with rage, which is often capriciously exerted ; and though this animal seems gentle and placid to its master, when tamed, yet it is still to be distrusted and managed with caution, as it is often treacherous and resentful without a cause.

The black bears, we are told, are remarkably

attached to each other. The hunters never dare to fire at a young one while the dam is on the spot ; for, if the cub happens to be killed, she becomes so enraged, that she will either avenge herself, or die in the attempt. If, on the contrary, the mother should be shot, the cubs will continue by her side long after she is dead, exhibiting the most poignant affliction. A man nearly lost his life, a few years ago, in Hungary, by firing at a young bear in the presence of its dam, who had indeed been concealed from his sight by some bushes ; for, at one blow with her paw, she brought off a great part of his scalp.

This animal seldom uses its teeth as weapons of defence, but generally strikes its adversary very strongly with its fore paws, like a cat ; and, if possible, seizes him between its paws, and presses him to its breast with such force, as almost instantly to suffocate him.

The most usual way of killing the bears, is by means of fire-arms or arrows. The Laplanders easily overtake them in their snow shoes, and knock them down with clubs ; but they generally first shoot them, and then dispatch them with spears.

In some parts of Siberia, the hunters erect a scaffold of several barks laid over each other ; which fall altogether, and crush the bear, upon his stepping on the trap placed underneath. Another method is to dig pits, in which a smooth, solid, and very sharp-pointed post is fixed into the ground, rising about a foot above the bottom. The pit is carefully covered over with sods : and across the track of the bear, a small rope with an elastic figure is placed. As soon as the bear touches the rope, the wooden figure starts loose ; and the affrighted animal, endeavouring to save himself by flight, falls with a violent force into the pit, and is

killed by the pointed post. If he escapes this snare, at a little distance several caltrops and other instruments of annoyance frequently await him ; among which a similar image is erected. The persecuted beast, the more he strives to get free, fixes himself faster to the spot ; and the hunter, who lies in ambush, soon dispatches him.

Yet not only beneath and upon the earth, but even in the air, has man's inventive genius contrived to lay snares for the liberty and the life of this animal. The Koriaks, for this purpose, find some crooked tree, grown into an arched form ; at the bowed end of which they attach a noose, with a bait. The hungry bear is tempted by this object, and eagerly climbs into the tree, where he becomes infallibly the victim of his attempt ; for, on his moving the branch, the noose draws together, and he remains suspended to the tree, which violently springs back into its former position.

But still more singular and ingenious is the method adopted by the inhabitants of the mountainous parts of Siberia, to make this ferocious animal become his own destroyer. They fasten a very heavy block to a rope, that terminates at the other end with a loop. This is laid near a steep precipice, in the path on which the bear is accustomed to go. On getting his neck into the noose, and finding himself impeded by the clog, he takes it up in a rage, and to free himself from it, throws it down the precipice : it naturally pulls the bear after it, and he is killed by the fall. Should this, however, accidentally not prove the case, he drags the block again up the mountain, and reiterates his efforts ; till, with increasing fury, he either sinks nerveless to the ground, or ends his life by a decisive plunge

The bear's well known partiality for honey, gives

occasion to one of the Russian modes of taking him. To those trees where the bees are hived, a heavy log of wood is hung at the end of a long string. When the unwieldy creature climbs up to get at the hive, he finds himself interrupted by the log; he pushes it aside, and immediately attempts to pass it; but in returning, it hits him such a blow, that in a rage, he flings it from him with greater force, which makes it return with increased violence upon himself; and he sometimes continues this, till he is either killed, or falls from the tree.

These animals are so numerous in Kamtschatka, that they are often seen roaming about the plains in great companies; and they would infallibly have long since exterminated all the inhabitants, were they not here much more tame and gentle than the generality of bears in other parts of the world. In spring, they descend in multitudes from the mountains (where they have passed the winter) to the mouths of the rivers, for catching fish, which swarm in all the streams of that peninsula: If there be plenty of this food, they eat nothing but the heads of the fish; and when at any time they find the fisherman's nets, they dexterously drag them out of the water, and empty them of their contents.

When a Kamtschadale espies a bear, he endeavours to conciliate its friendship at a distance, accompanying his gestures by courteous words. The bears are indeed so familiar here, that the women and girls, when gathering roots and herbs, or turf for fuel, in the midst of a whole drove of bears, are never disturbed by them in their employment; and if any one of these animals comes up to them, it is only to eat something out of their hands. They have never been known to attack a man, except when roused on a sudden from sleep; and they very seldom turn upon the marksman, whether they

be hit or not. This humane character of the Kamtschadale bear, who herein differs so remarkably from his brethren of most other countries, procures him, however, no exemption from the persecutions of mankind. His great utility is a sufficient instigation to the avarice of man, to declare eternal war against him. Armed with a spear, or club, the Kamtschadale goes in quest of the peaceful animal, in his calm retreat ; who, meditating no attack, and intent only on defence, gravely takes the faggots which his persecutor brings him, and with them, himself chokes up the entrance of his den. The mouth of the cavern being thus closed, the hunter bores a hole through the top, and transfixes with the greatest security his defenceless foe.

They are sometimes cruel enough to lay a board driven full of iron hooks, in the bear's track ; placing near it something heavy, which the animal must throw down as he passes. Alarmed by this, he runs upon the board with greater force than he would otherwise do ; and, finding one of his paws wounded, and fixed by the hooks, he endeavours to free himself by striking it forcibly with the other. Both the paws being now fixed, bellowing with pain, he rises on his hind feet ; this motion immediately brings the board before his eyes, and so perplexes him, that he throws himself down in fury, and his violent struggles at length destroy him.

It would be difficult to name a species of animals, except the sheep, so variously serviceable to man, after its death, as the bear is to the Kamtschadales. Of the skin, they make beds, covertures, caps, and gloves, and collars for their sledge-dogs. Those who go upon the ice for the capture of marine animals, make their shoe soles of the same substance, which thus never slip upon the ice.

The fat of the bear is held in great estimation by all the inhabitants of Kamtschatka, as a very savoury and wholesome nourishment ; and, when rendered fluid by melting, it supplies the place of oil. The flesh is esteemed a great delicacy. The intestines, when cleansed and properly scraped, are worn by the fair sex, as masks to preserve their faces from the effects of the sun-beams ; which here, being reflected from the snow, are generally found to blacken the skin, but by this means the Kamtschadale ladies preserve a fine complexion. The Russians of Kamtschatka make of these intestines window panes, which are as clear and transparent as those made of Muscovy glass. Of the shoulder blades are made sickles for cutting grass ; and the heads and hanches are hung up by these people, as ornaments or trophies, on the trees about their dwellings.

The Kamtschadales also owe infinite obligations to the bears, for the little progress they have hitherto made, as well in the sciences, as even in the polite arts. They confess themselves indebted to these animals for all their knowledge of physic and surgery ; by observing what herbs the bears have applied to the wounds they have received, and what methods they have pursued when they were languid, and disordered, these people have acquired a knowledge of most of those simples, which they have recourse to either as external or internal applications. But the most singular circumstance of all is, that they admit the bears to be their dancing masters ; and, in what they call the bear dance, every gesture and attitude of that animal is so faithfully portrayed, as to afford sufficient indications to what they are indebted for this acquirement. They represent the bear's sluggish and stupid gait, and its different feelings and situations ; as the young ones about the dam, the amorous

sports of the male with the female, and its agitation when pursued. All their other dances are similar to the bear dance, in many particulars; and those attitudes are always thought to approach nearest to perfection, which most resemble the motions of the bear.

If the uses of the bear be so various to the Kamtschadales, not less general is the wear of his fine and warm fur to persons of the higher classes in Russia. A light black bear skin is one of the most comfortable and costly articles in the winter wardrobe of a man of fashion, at Petersburg or Moscow.

Dr. Townson was informed, by the peasantry of Hungary, (what, he says, he had often before heard,) that when the bears leave the woods, and come into the corn fields at night to feed, they draw the standing corn through their fore paws, then rub the detached ears between them, blow away the chaff, and eat the grain. Mr. Pennant tells us, that bears are very fond of peas; of which they will tear up great quantities, and, beating them out of the shells on some stone or hard spot of ground, eat the grain, and carry off the straw to their dens.

It is well known, that the bear may, with some little difficulty, be rendered tame and docile; and it has then the appearance of being mild and obedient to its master; but it is not to be trusted, without caution. It may be taught to walk, to lay hold of a pole with its paws, and perform various tricks to entertain the multitude; who are highly pleased with the awkward measures of this rugged animal, which it seems to suit to the sound of an instrument, or to the voice of its leader. But, to give the bear this kind of education, it is necessary to have it taken young, and to accustom it early to restraint and discipline. An old bear



will suffer no restraint without discovering the most furious resentment; neither the voice nor the menaces of his keeper have any effect upon him; he equally growls at the hand that is held out to feed, and at that which is raised to correct him.

The excessive cruelties practised on this poor animal in teaching it to walk upright, and to regulate its motions to the sound of the pipe, are such as make sensibility shudder. Its eyes are frequently put out; and an iron ring being passed through the cartilage of the nose to lead it by, it is kept from food, and beaten, till it yields obedience to the will of its savage tutors. Some of them are taught to perform, by setting their feet upon heated iron plates, and then playing music to them while in this uneasy situation. It is truly shocking to every feeling mind, to reflect that such cruelties should be exercised upon any part of the brute creation by our fellow men. That these should be rewarded by numbers of unthinking people, who crowd around to see the animal's rude attempts to imitate human actions, is not to be wondered at; but it is much to be wished that the timely interference of the magistrate would prevent every exhibition of the kind; that in England, at least, we might not be reproached with tolerating practices so disgraceful to humanity.

#### AMERICAN BEAR.

THE American bear differs from the European species, principally in being smaller; and in having a more lengthened head, pointed nose, and longer ears. The hair is also more smooth, black, soft, and glossy. The cheeks and throat are of a yellowish brown colour.

It is found in all the northern parts of America;

migrating occasionally southwards in quest of its food, which is said to be entirely vegetable; or sometimes, when pressed by excessive hunger, fish, and particularly herrings.

These bears arrive in Louisiana, driven thither by the snows in the more northern climates, towards the end of autumn. At this time they are always very lean; as they do not leave the north till the earth is covered with snow, when their subsistence of course becomes very scanty.

In the country near the Mississippi, they seldom venture to any great distance from the banks of that river; but on each side have in winter such beaten paths, that persons unacquainted with them, would mistake them for the tracks of men. Du Pratz says he was once, though at a distance of nearly two hundred miles from any human dwelling, for a while deceived by one of them, which appeared as though thousands of men had been walking along it bare footed. Upon inspection, however, he found that the prints of the feet were shorter than those of a man, and that at the end of each toe there was the impression of a claw. "It is proper," he says "to observe, that in those paths the bear does not pique himself upon politeness, and will yield the way to nobody; therefore, it is prudent for a traveller not to fall out with him for such a trifling affair."

About the end of December, from the abundance of fruits they find in Louisiana and the neighbouring countries, the bears become so fat and lazy, that they can scarcely run. At this time, when the animals are also in a condition to furnish a large quantity of oil, they are hunted by the American Indians. The nature of the chase is generally this: the bear chiefly adopts for his retreat the hollow trunk of an old cypress, which he climbs, and then descends into the cavity from

above. The hunter, whose business it is to watch him into his retreat, climbs by means of hooks, a neighbouring tree, where he seats himself opposite to the hole. In one hand he holds his gun ; and in the other a torch, which he darts into the cavity. Frantic with rage and terror, the bear makes a spring from his station ; but the hunter seizes the instant of his appearance, and shoots him through the head or shoulder.

Some of the Indian tribes adopt such singular ceremonies in their chase of the bear, that I shall transcribe the curious account of them inserted in Charlevoix Travels in North America.

“ The chase of these animals is a matter of the first importance, and is never undertaken without abundance of ceremony. A principal warrior first gives a general invitation to all the hunters. This is followed by a most strict fast of eight days, a total abstinence from all kinds of food ; notwithstanding which, the day is passed in continual song. This is done to invoke the spirits of the woods to direct the hunters to the places where there are abundance of bears. They even cut the flesh in divers parts of their bodies, to render the spirits more propitious. They also address themselves to the manes of the beasts slain in the preceding chases, as if these were to direct them in their dreams, to plenty of game. One dreamer alone cannot determine the place of the chase ; numbers must concur ; but as they tell each other their dreams, they never fail to agree. This may arise either from contrivance, or from a real agreement in their dreams, on account of their thoughts being perpetually turned on the same thing. The chief of the hunt now gives a great feast, at which no one dares to appear without first bathing. At this entertainment they eat with great moderation, contrary to their usual custom. The mas-

ter of the feast alone touches nothing ; but is employed in relating to the guests antient tales of the wonderful feats in former chases ; and fresh invocations to the manes of the deceased bears conclude the whole.

“ They then sally forth amidst the acclamations of the village ; equipped as if for war, and painted black. Every able hunter is on a level with a great warrior ; but he must have killed his dozen great beasts before his character is established ; after which his alliance is as much courted as that of the most valiant captain. They now proceed on their way in a direct line ; neither rivers, marshes, nor any other impediments, stop their course ; driving before them all the beasts they find. When they arrive at the hunting ground, they surround as large a space as they can with their company ; and then contract their circle, searching at the same time every hollow tree, and every place fit for the retreat of a bear ; and they continue the same practice till the time of the chase is expired.

“ As soon as a bear is killed, a hunter puts into his mouth a lighted pipe of tobacco, and blowing into it fills the throat with the smoke, conjuring the spirit of the animal not to resent what they are going to do to its body, nor to render their future chases unsuccessful. As the beast makes no reply, they cut out the string of the tongue, and throw it into the fire. If it crackles and shrivels up, (which it is almost sure to do,) they accept it as a good omen ; if not they consider that the spirit of the beast is not appeased, and that the chase of the next year will be unfortunate.

“ The hunters live well during the chase, on provisions which they bring with them. They return home with great pride and self complacency ; for, to kill a bear, forms the character of a com-

plete man. They give a great entertainment, at which they make it a point to leave nothing uneaten. The feast is dedicated to a certain genius, (apparently that of Gluttony;) whose resentment they dread if they do not eat every morsel, and even sup up the melted grease in which the meat was dressed: They sometimes eat till they burst, or bring themselves some violent disorders. The first course is the greatest bear they have killed; without even taking out the entrails, or skinning it; contenting themselves with singeing the skin, as is practised with hogs."

It is common with the southern Indians of America, to tame and domesticate the young cubs of the bear; and these are frequently taken so young that they cannot eat. On such occasions the Indians often oblige their wives to suckle them; and one of the company's servants at Hudson's Bay, whose name was Isaac Batt, willing to be as great a brute as his Indian companions, absolutely forced one of his wives, who had recently lost her infant, to suckle a young bear.

#### POLAR, OR WHITE BEAR.

THIS species has a long head and neck, and short round ears; the end of its nose and claws are black; its teeth are very large; its hair is long, soft, and white, tinged in some parts with yellow; its limbs are of great size and strength; its eyes are very small.

Animals of this species grow to a vast size; the skins of some are thirteen feet long. They are confined to the coldest part of the globe, and have been found as far as navigators have penetrated northward, above the parallel of eighty degrees. The frigid climates alone seem adapted to their nature; even the north of Norway and the coun-

try of Meson, in the north of Russia, are destitute of them; they are found on the shores of Hudson's Bay, Greenland, and Spitzbergen; they are also met with in great abundance in Nova Zembla, and from the river Oby, along the coast of Siberia, to the mouths of the Jenesei and Lena; but are never seen far inland, unless they lose their way in mists. None are found in Kamschatka or its islands.

They have been seen as far south as Newfoundland; but they are not natives of that country, being only brought there accidentally on the islands of ice that float along the northern seas, from the polar regions southward.

The immense number of these animals in the polar regions are truly astonishing. They are not only seen at land, but often on ice-floats several leagues at sea. They are frequently transported in this manner to the very shores of Iceland; where they no sooner land, than all the natives are in arms to receive them. It sometimes happens that when a Greenlander and his wife are paddling out at sea, by coming too near an ice-float, a white bear unexpectedly jumps into their boat; and, if he does not upset it, sits calmly where he first alighted, and like a passenger suffers himself to be rowed along. It is probable that the Greenlander is never very fond of his unwieldy guest; however, he makes a virtue of necessity, and hospitably rows him to shore.

The polar bears are animals of tremendous fierceness. Barentz, in his voyage in search of a north-east passage to China, had the most horrid proofs of their ferocity in the island of Nova Zembla; where they attacked his seamen, seizing them in their mouths, carrying them off with the utmost ease, and devouring them even in the sight of their comrades.

Not many years ago, the crew of a boat belong-

ing to a ship in the whale fishery, shot at a bear at a little distance, and wounded it. The animal immediately set up the most dreadful howl, and ran along the ice towards the boat. Before he reached it, a second shot was fired, which hit him. This served but to increase his fury. He presently swam to the boat, and in attempting to get on board, placed one of his fore feet upon the gunnel ; but a sailor, having a hatchet in his hand, cut it off. The animal still, however, continued to swim after them, till they arrived at the ship ; and several shots were fired at him, which took effect ; but on reaching the ship, he immediately ascended the deck ; and the crew having fled into the shrouds, he was pursuing them thither, when a shot laid him dead upon the deck.

The usual food of these animals consist of seals, fish, and the carcasses of whales ; but when on land, they prey on deer, and other animals, as hares, young birds, &c. They likewise eat various kinds of berries, which they happen to find. They go on the flakes of ice in search of seals ; and also attack the arctic walrus ; but this creature makes a noble defence with its long tusks, and sometimes comes off victorious. They are said to be frequently seen in Greenland in great droves, allured by the smell of the flesh of seals ; and they will sometimes surround the habitations of the natives, and attempt to break in ; when, it is added, the most successful method of repelling them is by the smoke of burnt feathers.

The affection between the parent and the young is so great, that they will sooner die than desert each other in distress. We shall relate an instance. " While the Carcase frigate, which went out some years ago, to make discoveries towards the north pole, was locked in the ice, early one morning the man at the mast-head gave notice that three

bears were making their way very fast over the Frozen Ocean, and were directing their course towards the ship. They had, no doubt, been invited by the scent of some blubber of a sea-horse, that the crew had killed a few days before ; which had been set on fire, and was burning on the ice at the time of their approach. They proved to be a she bear and her two cubs ; but the cubs were nearly as large as the dam. They ran eagerly to the fire ; and drew out of the flames part of the flesh of the sea-horse, that remained unconsumed, and ate it voraciously. The crew from the ships threw great lumps of the flesh of the sea-horse, which they had still remaining, upon the ice. These the old bear fetched away singly, laid every lump before her cubs as she brought it, and dividing it, gave to each a share, reserving but a small portion to herself. As she was fetching away the last piece, the sailors levelled their muskets at the cubs, and shot them both dead ; and in her retreat, they wounded the dam, but not mortally. It would have drawn tears of pity from any but unfeeling minds, to have marked the affectionate concern expressed by this poor beast in the last moments of her expiring young. Though she was herself dreadfully wounded, and could but just crawl to the place where they lay, she carried the lump of flesh she had fetched away, as she had done others before ; tore it in pieces, and laid it before them : and when she saw that they refused to eat, she laid her paws first upon one, and then upon the other, and endeavoured to raise them up ; all this while it was pitiful to hear her moan. When she found she could not stir them, she went off, and when she had got to some distance, looked back and moaned ; and that not availing her to entice them away, she returned, and, smelling round them,



began to lick their wounds. She went off a second time as before ; and, having crawled a few paces, looked again behind her, and for some time stood moaning. But still her cubs not rising to follow her, she returned to them again ; and with signs of inexpressible fondness, went round, pawing them, and moaning. Finding at last, that they were cold and lifeless, she raised her head towards the ship, and uttered a growl of despair, which the murderers returned with a volley of musket balls. She fell between her cubs, and died licking their wounds.

The males, says Mr. Hearne, are, at a certain time of the year, so much attached to their mates, that he has often seen one of them, when a female was killed, come and put his two fore paws over her, and in this position suffer himself to be shot rather than quit her.

During the winter, these animals retire and bed themselves deep in the snow, or under the fixed ice of some eminence ; where they pass in a state of torpidity the long and dismal arctic night, and re-appear only with the return of the sun.

Their flesh is white, and said to taste like mutton ; but their liver is very unwholesome ; their fat is melted for train oil ; and that of the feet is used in medicine.

One of this species was brought over to England a few years ago, and exhibited in many places. It was very furious ; almost always in motion ; roared loud ; and seemed very uneasy, except when cooled, by having pail fulls of water poured upon it.

Land bears, sometimes spotted with white, at other times wholly white, are sometimes seen in the parts of Russia bordering on Siberia, in a wandering state, and are supposed to have strayed out of the lofty snowy mountains which divide the

two countries. They are said to dread the whale, who scents and pursues them from a natural antipathy, because they eat her young.

## GLUTTON.

This is a bear with a round head, a thick blunt nose, and short ears, rounded except at the tip. Its limbs are large, and its back is straight, marked along its whole length with a tawny line ; its tail is short, and very full of hair ; its hair in all other parts is finely damasked, or watered like a silk, and very glossy ; but it sometimes varies to a brown colour. One brought from Siberia, and kept alive at Dresden, measured forty-four inches, and nineteen in height.

It inhabits Lapland, the northern and eastern parts of Siberia, and Kamtschatka. Those of Kamtschatka differ and vary to white and yellowish. The natives prefer the skins of these to such as are black ; they say the heavenly beings wear no other garments. The women wear the paws of the white sort in their hair, and esteem the skin of one the most valuable present their husbands or lovers can make them.

It is chiefly in North America that this voracious creature is seen lurking among the thick branches of trees, in order to surprise the deer, with which the extensive forests of that part of the world abound. Endued with a degree of patience equal to its rapacity, the glutton singles out such trees as it observes marked by the teeth or the antlers of the deer ; and is known to remain there watching for several days together. If it has fixed upon a wrong tree, and finds that the deer have either left that part of the country, or cautiously shun the place, it reluctantly descends, pursues the beaver to its retreat, or even ventures into the water, in pur-

suit of fishes. But if it happens, that by long attention and keeping close, at last the elk or the rein-deer happens to pass that way, it at once darts down upon them, sticks its claws between their shoulders, and remains there unalterably firm. It is in vain that the large frightened animal increases its speed, or threatens with its branching horns; the glutton having taken possession of its post, nothing can drive it off; its enormous prey drives rapidly along amongst the woods, rubs itself against the largest trees, and tears down the branches with its expanded horns; but still its insatiable foe sticks behind, eating its neck, and digging its passage to the greatest blood-vessels that lie in that part. Travellers who wander through those deserts, often see pieces of the glutton's skin sticking to the trees against which it was rubbed by the deer. But the animal's voracity is greater than its feelings, and it never seizes without bringing down its prey. When, therefore, the deer, wounded and feeble with the loss of blood, falls, the glutton is seen to make up for its former abstinence by its present voracity. As it is not possessed of a feast of this kind every day, it resolves to lay in a store to serve it for a good while to come. It is, indeed, amazing how much one of these animals can eat at a time! That which was seen by Mr. Klein, although without exercise or air, although taken from its native climate, and enjoying but an indifferent state of health, was yet seen to eat thirteen pounds of flesh every day, and yet remain unsatisfied. We may, therefore, easily conceive how much more it must devour at once, after a long fast, of a food of its own procuring, and in a climate most natural to its constitution. We are told, accordingly, that from being a lank, thin animal, which it naturally is, it then gorges in such quantities, that its belly is distended, and its whole

figure seems to alter. Thus voraciously it continues eating till, incapable of any other animal function, it lies totally torpid by the animal it has killed ; and in this situation continues for two or three days. In this loathsome and helpless state, it finds its chief protection from its horrid smell, which few animals care to come near ; so that it continues eating and sleeping till its prey be devoured, bones and all, and then it mounts a tree, in quest of another adventure.

The glutton, like many of the weasel kind, seems to prefer the most putrid flesh to that newly killed ; and such is the voraciousness of this hateful creature, that, if its swiftness and strength were equal to its rapacity, it would soon thin the forests of every other living creature. But, fortunately, it is so slow, that there is scarce a quadruped that cannot escape it, except the beaver. This, therefore, it very frequently pursues upon land ; but the beaver generally makes good its retreat by taking to the water, where the glutton has no chance to succeed. This pursuit only happens in summer ; for in winter all that remains is to attack the beaver's house, as at that time it never stirs from home. This attack, however, seldom succeeds ; for the beaver has a covert way bored under the ice, and the glutton has only the trouble and disappointment of sacking an empty town.

A life of necessity generally produces a good fertile invention. The glutton, continually pressed by the call of appetite, and having neither swiftness nor activity to satisfy it, is obliged to make up by stratagem the defects of nature. It is often seen to examine the traps and the snares laid for other animals, in order to anticipate the fowlers. It is said to practise a thousand arts to procure its prey, to steal upon the retreats of the rein-deer, the flesh of which animal it loves in preference to all

others ; to lie in wait for such animals as have been maimed by the hunters ; to pursue the isatis while it is hunting for itself ; and when that animal has run down its prey, to come in and seize upon the whole, and sometimes to devour even its poor provider ; when these pursuits fail, even to dig up the graves, and fall upon the bodies interred there, devouring them bones and all. For these reasons the natives of the countries where the glutton inhabits, hold it in utter detestation, and usually term it the vulture of quadrupeds. And yet, it is extraordinary enough, that, being so very obnoxious to man, it does not seem to fear him. We are told by Gmelin of one of these coming up boldly and calmly where there were several persons at work, without testifying the smallest apprehension, or attempting to run until it had received several blows, that at last totally disabled it. In all probability it came among them seeking its prey ; and having been used to attack animals of inferior strength, it had no idea of a force superior to its own. The glutton, like all the rest of its kind, is a solitary animal ; and is never seen in company, except with its female, with which it couples in the midst of winter. The latter goes with young about four months, and brings forth two or three at a time. They burrow in holes as the weasel ; and the male and female are generally found together, both equally resolute in defence of their young. Upon this occasion the boldest dogs are afraid to approach them ; they fight obstinately, and bite most cruelly. However, as they are unable to escape by flight, the hunters come to the assistance of the dogs, and easily overpower them. Their flesh, it may readily be supposed, is not fit to be eaten ; but the skins amply recompense the hunters for their toil and danger. The fur has the most beau-

tiful lustre that can be imagined, and is preferred before all others, except that of the Siberian fox, or the sable. Among other peculiarities of this animal, Linnaeus informs us that it is very difficult to be skinned ; but from what cause, whether its abominable stench, or the skin's tenacity to the flesh, he has not thought fit to inform us.

Pontoppidan was assured by a friend, a man of probity, that he had taken a glutton alive, a circumstance which seldom takes place ; and when he was chained to a wall, his hunger drove him to attack even the stones and mortar.

He is so strong an animal, that three stout greyhounds are scarcely able to overcome him. One that was put into the water, had two dogs let loose at him. The glutton soon fixed his claws into the head of one of them, and had the sense to keep the animal under water till it was suffocated. When the glutton is attacked, he makes a stout resistance ; for he will tear even the stock from a gun with his teeth, or break the trap in pieces in which he is caught. He is, notwithstanding, capable of being rendered tame, and of learning many entertaining tricks.

#### WOLVERINE.

Is considered by Shaw as a variety of the glutton. It is not uncommon in the northern regions of America. It resembles the wolf in size, and the glutton in the figure of its head. The upper parts and the belly are of a reddish brown ; the sides are yellowish brown ; and a band of this colour crosses the back near the tail, which is long and of a chesnut colour. The face is black. The legs are very strong, thick, short, and black ; and the soles of the feet are covered with hair.

The pace of these animals very slow ; but their

wonderful sagacity, strength, and acute scent, make ample amends for this defect. They burrow in the ground ; and are said to be very fierce and savage, so much so as even to be a terror to the wolves and bears. They are also possessed of great courage and resolution. One of them has been known to seize on a deer that an Indian had killed ; and though the Indian advanced within twenty yards, he still refused to abandon his capture, and even suffered himself to be shot on the fallen animal. They have also been frequently seen to take a deer from a wolf, before the latter had time to begin his repast after killing it. Indeed their amazing strength, and the length and sharpness of their claws, render them capable of making a strong resistance against every other animal of their own country.

As a proof of their surprising strength, there was one at Churchill, on Hudson's Bay, some years since, that overset the greatest part of a pile of wood which measured upwards of seventy yards round, and contained a whole winter's firing, to get at some provisions that had been hidden there by the company's servants when going to the factory to spend the Christmas holidays. This animal had for many weeks been lurking about the neighbourhood of their tent ; and had committed many depredations on the game caught in their traps and snares, as well as eaten many of the foxes that were killed by guns set for the purpose ; but he was too cunning to take either trap or gun himself. The people thought they had adopted the most effectual method to secure their provisions, by tying them up in bundles, and placing them on the top of the wood pile. They could not suppose the wolverine would even have found out where they were ; and much less that he could get at them if he did discover them. To their astonishment, however,

when they returned, they found the greatest part of the pile thrown down, notwithstanding some of the trees with which it was constructed were as much as two men could carry. The wood was very much scattered about; and it was imagined, that in the animal's attempting to carry off his booty, some of the small parcels of provisions had fallen down into the heart of the pile, and, sooner than lose half his prize, he was at the trouble of doing this. The bags of flour, oatmeal, and pease, though of no use to him, he tore all to pieces, and scattered the contents about on the snow; but every bit of animal food, consisting of beef, pork, bacon, venison, salted geese, and partridges, in considerable quantities, he carried away.

The wolverines are great enemies to the beavers, which they sometimes take as they come from their houses; but the manner of life of the latter renders them more difficult to come at than many other animals. They commit vast depredations on the foxes during the summer, while the young ones are small. - Their quick scent directs them to the dens; and if the entrance be not large enough, their strength enables them to widen it; when they go in, and kill both the mother and her cubs. They are, in short, nearly the most destructive animals of the country they inhabit.

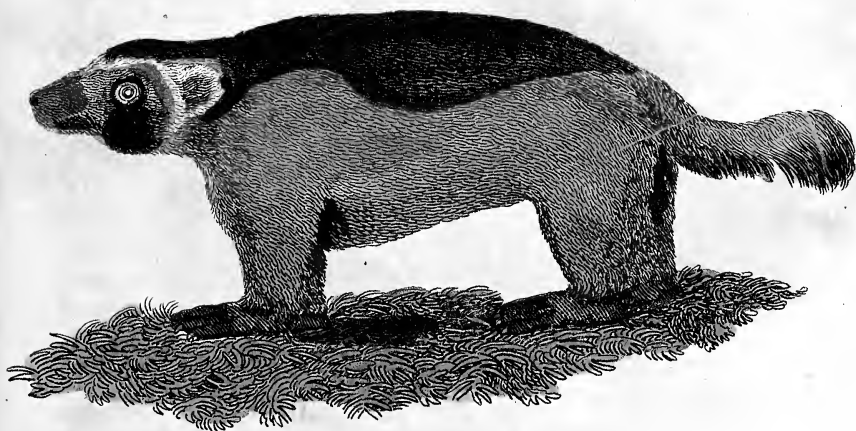
#### RACCOON.

THE raccoon is a native of North America, and several of the West India islands, where it is said to inhabit the hollows of trees. Its colour is grey; and its head is shaped somewhat like that of a fox. The face is white; and the eyes, which are large, are surrounded with a black band, from which a dusky stripe runs along the nose. The tail is very





RACCOON



GLUTTON



bushy, and is annulated with black. The back is somewhat arched ; and the fore legs are shorter than the others. The length of the raccoon is about two feet, from the nose to the tail ; and the tail is about a foot long.

Its food consists principally of maize, sugar-canes, and various sorts of fruits. It is also supposed to devour birds, and their eggs. When near the shores, the raccoons live much on shell-fish, and particularly on oysters. We are told, that they will watch the opening of the shell, dexterously put in their paw, and tear out the contents ; sometimes, however, the oyster suddenly closes, catches the thief, and detains him, till he is drowned by the return of the tide. They feed likewise on crabs ; in the taking of which they exhibit much cunning. Brickell, who relates these circumstances, says, that the raccoon will stand on the side of a swamp, and hang its tail over into the water ; which the crabs, mistaking for food, lay hold of ; and as soon as the beast feels them pinch, he pulls them out with a sudden jerk. He then takes them to a little distance from the water's edge ; and, in devouring them, is careful to get them cross-ways in his mouth, lest he should suffer from their nippers. A species of land crab, found in holes of the sand in North Carolina, are frequently the food of the raccoon. He takes them by putting one of his fore paws into the ground, and hauling them out. These animals feed chiefly by night ; as, except in dull weather, they sleep during the greatest part of the day.

Like the squirrel, it makes use of its paws to hold its food while eating, but it differs from the monkey kind, which use but one hand on those occasions, whereas the raccoon and the squirrel use both ; as, wanting the thumb, their paws singly are unfit for grasping or holding. Though

this animal be short and bulky, it is, however, very active ; its pointed claws enable it to climb trees with great facility ; it runs on the trunk with the same swiftness that it moves upon the plain, and sports among the most extreme branches with great agility, security, and ease ; it moves forward chiefly by bounding, and though it proceeds in an oblique direction, it has speed enough most frequently to escape its pursuers.

The planters in Jamaica consider these animals as one of their greatest miseries ; they have contrived various methods of destroying them, yet still they propagate in such numbers, that neither traps nor fire-arms can set them free ; so that a swarm of these famished creatures are found to do more injury in a single night, than the labours of a month can repair.

But though, when wild, they are thus troublesome, in a state of tameness, no animal is more harmless or amusing ; they are capable of being instructed in various little amusing tricks. The raccoon is playful and cleanly, and is very easily supported ; it eats of every thing that is given it, and, if left to itself, no cat can be a better provider ; it examines every corner, eats of all flesh, either boiled or raw, eggs, fruits, or corn, insects themselves cannot escape it, and if left at liberty, in a garden, it will feed upon snails, worms, and beetles ; but it has a particular fondness for sweets of every kind, and to be possessed of these, in its wild state, it incurs every danger, Though it will eat its provisions dry, it will for choice dip them in water, if it happens to be in the way ; it has one peculiarity which few other animals have been found to possess, it drinks as well by lapping like the dog, as by sucking like the horse.

His fur is esteemed next to that of the beaver for making hats.

A letter from M. Blanquart to M. Buffon gives us an amusing delineation of the manners of this animal.

“ My raccoon, before he came into my possession, had always been chained. In this state of captivity, he was very gentle, but had little inclination to caress. The people of the house were all equally kind to him, but he received them differently ; for what pleased him in one, he revolted against in another ; and in this his conduct was invariable.

“ His chain sometimes broke, and liberty rendered him insolent. He took possession of an apartment, and would allow none to enter it ; it was with some difficulty that he could be again reconciled to bondage. Since he came under my management, I have frequently given him his liberty. Without losing sight of him, I allowed him to walk about with his chain ; and each time his gratitude was expressed by a thousand caressing gambols ; but this is by no means the case when he makes his escape himself ; he then roams about, sometimes for three or four days together, upon the roofs of the neighbouring houses, descends during the night time into the court-yards, enters the hen-houses, strangles all the poultry, and eats their heads. His chain does not render him more humane, but more circumspect only ; he then employs every artifice to make the fowls grow familiar with him ; he permits them to partake of his victuals ; and it is only after having inspired them with the highest notions of security, that he seizes one and tears it in pieces. Some young cats have met with the same fate.

“ This raccoon is not very grateful for the caresses he receives ; but is extremely sensible of bad treatment. A servant one day gave him several lashes with a whip ; but the man has endea-

voured ever since in vain to accomplish a reconciliation. Neither eggs nor fish, of which the animal is very fond, can appease his resentment. At the approach of the servant, he flies into a rage, his eyes kindle, he springs at the man, utters dolorous cries, and rejects every thing that is presented to him, till the object of his resentment disappears.

“ If any person strikes him, or if he be attacked by an animal that he thinks stronger than himself, he makes no resistance, but like the hedge-hog, conceals his head and feet, by rolling up his body in the form of a ball ; no complaint escapes him ; and in this position, he calmly submits to be killed.

“ He abhors children ; their crying irritates him ; and he makes every effort to spring upon them. A small bitch, of which he is fond, he chastises severely if she bark too loud. I know not why, several other animals equally detest sharp cries.”

This species acquires not its full growth till it be two years and a half old.

#### COMMON BADGER.

THIS species has small eyes, short rounded ears, and a short thick neck ; his nose and chin, the lower side of his cheeks, and the middle of his forehead, are white ; his ears and eyes are inclosed in a pyramidal bed of black ; the hair on his body is long and coarse ; its bottom is of a yellowish white ; its middle is black ; and it is ash-coloured at the ends ; his throat, breast and belly, are black ; his tail is covered with long hair, of the same colour with that of the body ; his legs are very short and thick ; the claws on his fore feet are very long ; a fetid white matter exudes from the orifice beneath his tail. He is an animal of a very



SQUIRRELL  
OPOSSUM



BADGER





clumsy make, commonly two feet six inches in length ; his tail measures six inches ; he weighs from fifteen to thirty-four pounds. Mr. Pennant met with a male of the weight last mentioned in the year 1779 ; but such are very rare.

It inhabits most parts of Europe, as far north as Norway and Russia, and the Step or desert beyond Orenburg in the Russian Asiatic dominions ; in Great Tartary, and in Siberia about the river Tom, and even about the Lena ; but there are none to the north. It inhabits China also, and is often found in the butchers' shops in Peking, the Chinese being fond of them for the table. It is a scarce animal in most countries ; it is a diffident and solitary creature ; it seldom appears in the day ; it confines itself much to its hole, and is an indolent, sleepy creature, but generally very fat. It feeds by night, and eats roots, fruits, grass, insects, and frogs, but is not carnivorous, according to Mr. Pennant, while Buffon asserts that it prefers flesh to every thing else. It runs very slowly ; when overtaken, it comes to bay, and defends itself vigorously ; its bite is hard and dangerous. It is hunted during the night for the skin, which serves for pistol furniture, and its hair for making brushes to soften the shades in painting. Its flesh makes good bacon. The division of this species into two, the swine and the dog badger, Mr. Pennant thinks unnecessary, as he asserts there is only one. It burrows under ground, and makes several apartments, but forms only one entrance from the surface.

M. Buffon says, the badger retires to the most secret places, to the inmost recesses of the forest, and there digs a subterranean habitation ; he seems to fly society, and even the light, and spends three fourths of life in his dark abode, from which he never departs but in quest of subsistence. As

his body is long ; his legs short ; his claws, especially those of the fore feet, very long and strong ; he digs and penetrates the earth with greater facility than any other animal ; he makes his hole winding and oblique. The fox, who cannot dig with equal dexterity, avails himself of the operations of the badger. Being unable to make him quit his habitation by force, the fox practises every art to render him uneasy. He stands sentinel at the entrance of the hole, and even defiles it with his ordure. He afterwards takes possession, enlarges, and fits it up for his own accommodation. The badger, though obliged to change his habitation, leaves not his country ; he goes to a small distance only, where he digs a fresh hole. When at some distance from his hole, he is soon overtaken by the dogs. They seldom, however, accomplish their purpose without assistance. The hair of the badger is very thick ; and his legs, jaws, teeth, and claws, are exceedingly strong. These natural weapons he uses with courage and dexterity. He lies on his back, and resists all the efforts of the dogs, and wounds them in the most dangerous manner. He is besides tenacious of life, fights long, makes a brave defence, and persists to the last extremity.

The young ones are easily tamed ; they play with the dogs, and follow the person who feeds them ; but when taken old they continue always savage. They are neither mischievous nor ravenous, like the wolf and the fox. They often remain in their holes three or four days together, especially during snow. They keep their habitations extremely clean, and never defile them with their ordure. The male is seldom found with the female. When about to bring forth, she cuts down herbage, bundles it up, and trails it with her feet to the bottom of her hole, where she makes a commo-

dious bed for herself and her young ones. She brings forth in summer ; and the litter consists of three or four.

#### AMERICAN BADGER,

IN Pennsylvania called the ground hog. This badger has a white line from the tip of the nose, passing between his ears to the beginning of his back, bounded on each side with black, as far as the hind part of the head ; then by a white one, and immediately between that and the ears, there is another of long black hair. His back is coloured like that of the common badger ; his sides are yellowish, and his belly cinereous ; his thighs are dusky ; his tail is covered with long dirty yellow hairs, tipped with white ; the end dusky.

#### INDIAN BADGER.

THIS animal has a small head, a pointed nose, and scarcely any external ears, only a small prominent rim round an oval orifice. The colour of its nose and face a little beyond the eyes, is black ; its crown, the upper part of the neck and back, are white, inclining to grey ; its legs, thighs, breast, belly, and sides, and the upper part of the tail, are black ; it has five toes on each foot ; the inner ones are small ; its claws are very long and straight ; its length is about two feet ; the length of its tail is about four inches ; its hair is short and smooth. It derives its name from the country it inhabits. It is very lively, playful, and good-natured. It sleeps rolled up, with its head between its hind legs. One in the possession of Mr. John Hunter, London, some years ago, refused all commerce with an English badger that was

turned in to it, and lived some time in the same place. It was wont to climb very readily over a division in its cage, and slept very little during the day time.

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## OPOSSUM TRIBE.

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THIS genus has two canine teeth in each jaw ; but the number of cutting teeth differs in different subjects ; and five toes on each foot ; those on the hind feet are formed like a hand, with a distinct thumb ; the tail is very long, slender, and usually naked. There are about eighteen species comprehended under this genus. They are most remarkable for a pouch which seems as a retreat for the young.

### VIRGINIAN OPOSSUM.

THIS animal has a long sharp-pointed face, and wide mouth ; large, round, naked, and very thin ears, of a black colour, edged with pure white ; it has small, lively black eyes, with long stiff hairs on each side of its nose, and behind its eyes ; its face is covered with short, soft, white hair ; the space round its eyes is dusky ; its neck is very short ; its sides are of a dirty yellow ; the hind part of its neck and its back are covered with hair above two inches long, soft, but uneven ; having its bottom of a yellowish white, the middle part black, and the ends whitish ; its sides are covered with dirty coloured dusky hair ; its belly with soft, woolly, dirty, white hair ; its legs and

VIRGINIAN OPOSSUM





thighs are blackish ; its feet dusky, and its claws, which are sharp, unless the thumb of the hind feet, white. The base of its tail is clothed with long hair like that on its back ; the rest of the tail is covered with small scales ; the half next the body is black, the rest white ; it has a disagreeable appearance, looking like the body of a snake. It has the same prehensile qualities as that of some monkeys.

Its body is round and very thick, and its legs are short ; the female has a large pouch on the lower part of her belly, in which the teats are lodged, and where the young shelter themselves as soon as they are brought forth. The usual length of this animal, when full grown, is about fifteen or twenty inches ; of its tail, twelve. It inhabits Virginia, Louisiana, Mexico, Brasil, and Peru. It is very destructive to poultry ; the more so as it sucks their blood without eating their flesh. It feeds also on roots and wild fruits. It is very active in climbing trees, will hang suspended by its tail, and, by swinging its body, fling itself among the boughs of a neighbouring tree. It continues frequently hanging by the tail, with its head downwards. It hunts eagerly after birds and their nests. It walks very slow ; when overtaken, it will feign itself dead ; but it is not easily killed, being as tenacious of life as a cat. It is harmless, and easily tamed.

When the female is about to bring forth, she makes a thick nest of dry grass, in some close bush, at the foot of a tree, and brings forth five or six young ones at a time. As soon as the young are brought forth, they take shelter in the pouch or false belly, or are placed in it by the mother, and fasten so closely to the teats, that they are not to be separated without difficulty. They are small, blind, and naked, when new born,

and resemble fœtuses ; it is therefore necessary that they should continue in that receptacle that nature has prepared for them, till they attain perfect shape, strength, sight, and hair, and are prepared to undergo what to them may be called a second birth ; after which, they run into this pouch, as into an asylum, in time of danger, and the parent carries them about with her. During the time of this second gestation, the female shews an excessive attachment to her young, and will suffer any torture rather than permit the place of their retreat to be laid open ; for she has the power of opening or closing it, by the assistance of some very strong muscles. The flesh of the old ones is very good, like that of a sucking pig. Their hair is dyed by the Indian women, and wove into garters and girdles ; but their skins are very fetid.

## MOLUCCA OPOSSUM.

THIS species has long, oval, and naked ears ; its mouth is very wide ; over each eye it has an oblong white spot ; the lips of its upper jaw, its throat, breast, and belly, are of a whitish ash-colour ; the rest of its hair is of a cinereous brown, tipped with tawny, and darkest on the back ; its tail is as long as the body ; near the base it is covered with hair ; the rest of it is naked ; its claws are hooked. On the belly of the female there is a pouch, like that of the former species, in which the young shelter. Margrave found six young ones in the pouch of one female ; she had ten cutting teeth above, and eight below. Its tail exceeds the length of both head and body ; its whole figure is of a much more slender and elegant make than that of the former. It is longer than the former species.



Its tail pulverised, and taken in a glass of water, is reckoned in New Spain a sovereign remedy against the gravel, colic, and several other disorders.

This genus is not confined to America, as Buffon asserts; it is frequently found in Java, the Molucca isles, and New Holland. This species is found in great numbers in Aroe and Solor. It is called in the Indies, pelandor Aroe, or the Aroe rabbit. They are reckoned very delicate eating, and are very common at the tables of the great, who rear the young in the same places in which they keep their rabbits. It inhabits also Surinam and the hot parts of America.

Mr. Pennant mentions a larger variety of this species, called the philander orientalis, described by Seba, and said to be brought from Amboyna; but complains, that much is wanted to complete the history of this genus.

#### JAVAN OPOSSUM.

THIS species of the opossum has a narrow fox-like head, upright pointed ears, a brown stripe passing through the eyes, very short fore legs, five toes on the fore feet, three on the hind; two of which are very strong, the outmost slender and weak.

His tail is thick, and shorter than the body.

In the upper jaw are six cutting teeth; two in the lower, formed like those of a squirrel. They have no canine teeth. They resemble in many instances the kangaroo.

On the belly of the female there is a complete pouch like that of the Virginia kind; the hair on the body is coarse; the face of the animal is seemingly that of a hare. They were first discovered by M. Le Bruyn, who saw, in Java, several of

them in an inclosure along with rabbits; they burrowed like them, but preserved their young ones in their pouch; the young ones would often peep out when the old ones were still. Specimens of them have been sent from Java to Holland.

### MURINE OPOSSUM.

THE murine opossum has long, broad ears, rounded at the extremity, thin and naked; its eyes are encompassed with black; the face, head, and upper part of the body are of a tawny colour; the belly of a yellowish white; its feet are covered with short whitish hair; its toes are formed like those of the Virginian opossum; its tail is slender, covered with minute scales to the very rump; its length from the nose to the tail is about six or eight inches, and the tail the same. The female wants the false belly; but on the lower parts, the skin forms on each side a fold, between which the teats are lodged. It is of a slender form, with a long, thin, snout.

This species varies in colour: some in Guiana are brown above, and white beneath.

It inhabits the hot parts of South America, and agrees with the others in its food and manners, and the prehensile power of its tail; the female brings from ten to fourteen young at a time; at least, she has so many teats. The young affix themselves to the teats as soon as they are brought forth, and remain attached to them, like so many inanimate things, till they attain growth and vigour to shift a little for themselves.

Both the Virginian, and the marmose or murine opossum, have each fifty teeth.

## MEXICAN OPOSSUM.

THIS animal has large, angular, naked, and transparent ears ; its nose is thicker than that of the former kind ; its whiskers are very large ; a slight border of black surrounds its eyes ; its face is of a dirty white, with a dark line running down the middle ; the hair on the head and upper part of the body is ash-coloured at the roots, but of a deep tawny brown at the tips ; its legs are dusky ; its claws white ; its belly dull cinereous ; its tail is long, and pretty thick, varied with brown and yellow ; hairy for about an inch at its origin, the rest naked. The length of the animal and of its tail are the same, each about nine inches ; the tail is prehensile, and serves instead of a hand.

This species inhabits the mountains of Mexico, and lives on trees, where it brings forth its young. When in any fright, they embrace their parent closely ; and she carries them along with her wherever she goes.

## CAYENNE OPOSSUM.

THE Cayenne opossum has a long, slender face, ears erect and pointed, but short ; its coat is woolly, but mixed with very coarse hairs, three inches long, of a dirty white from the roots to the middle, and thence to the ends of a deep brown ; its sides and belly are of a pale yellow ; its legs of a dusky brown ; it has a thumb on each foot, distinct from the toes ; on the toes of the fore feet, and thumb of the hind, there are nails ; on the toes of the hind feet there are crooked claws ; its tail is very long, naked, and scaly. A young one measured above sixteen inches, and its tail about fifteen. It inhabits Cayenne, the country from

which it has its name ; it is very active in climbing trees, on which it lives the whole day. In marshy places, on the shore, it feeds on crabs, which, when it cannot draw out of their holes with its feet, it hooks them by means of its long tail. If the crab, however, pinches its tail, a case not uncommon, it sets up a loud cry, which may be heard a great way off. Its common voice is a grunt, like a young pig. It is well furnished with teeth, and will defend itself stoutly against dogs. The female brings forth four or five young ones at a time, and secures them in a hollow tree. The natives eat these animals, and say their flesh resembles that of a hare. They are easily tamed, and will then refuse no kind of food.

#### NEW HOLLAND OPOSSUM.

THIS species was found near Endeavour river, on the eastern coast of New Holland ; it lodges in the grass, but is not common. Its length from the head to the tail, that is, the length of its body, is about thirteen inches ; the tail the same. The upper part of the head, the back, and sides, are covered with long, soft, glossy hairs, of a dark ash-colour at the bottom, of a rusty brown towards the ends ; the belly is of a dirty white. Its tail is taper, covered with short brown hair, except four inches of the end, which space is white, and naked underneath. Its toes are like those of the former species.

#### SHORT-TAILED OPOSSUM.

THE short-tailed opossum has naked ears ; its back is of a dull red, the belly paler. The tail is scarce half the length of the body ; it is thick at the base, and tapers toward the end. It has no

false belly ; but the young, as soon as they are brought forth, adhere to the teats of their mother. Seba says, she produces ten or twelve at a time. Its fur is very soft and elegant. It inhabits South America, and lives in the woods.

#### PHALANGER OPOSSUM.

THIS species of the opossum has a thick nose, and short ears covered with hair. It has eight cutting teeth in the upper jaw, and two in the lower. The hair on the upper part of the body is reddish, mixed with light ash colour and yellow. The hind part of the head and the middle of the back, are marked with a black line ; the throat, belly, legs, and part of the tail, are of a dirty yellowish white ; the rest of the tail is brown and yellow ; the body of the female is marked with white ; the first and second toes of the hind feet are closely united ; the claws are large ; the thumb on the hind feet is distinct, like that of the other species ; the bottom of the tail is covered with hair for near two inches and a half ; the rest of it is naked. The length of the animal, from the nose to the tail, is near nine inches. Dr. Pallas says that this species inhabits the East Indian islands ; but that it is not found in Surinam, as Buffon conjectures. Its voice resembles that of a squirrel, and it frequently assumes the attitude of that animal when feeding.

#### MERIAN OPOSSUM.

THIS animal derives its name from Sibilla Merian, a German paintress, who first discovered, and drew the figure of this species at Surinam. The Merian opossum has long, sharp-pointed, naked ears ; its head and body are of a yellowish

brown colour ; its belly is white, tinged with yellow ; its fore feet are divided into five fingers, the hind ones into four fingers and a thumb, each furnished with flat nails. Its tail is very long and slender ; and, except at the base, quite naked. The length of the animal, from the nose to the tail, is ten inches ; the tail exceeds the length of both the body and the head. It inhabits Surinam, and burrows under ground. The female brings five or six young at a time, which follow her ; but on any apprehension of danger, they all jump on her back, and, twisting their tails round her's, keep fast hold ; and she immediately runs with them into her hole.

## PHILANDER.

THE philander is about the size of a large rat ; the head is large, the snout thick, and the ears rounded and upright, though in Seba's figure, as well as in the Linnæan description, they are said to be pendulous ; the abdominal pouch contains two large mammæ, each furnished with two teats. The tail is longer than the body, and is hairy for some little distance from the base, the remainder being naked, and towards the end prehensile. The length of the body is nine inches, and of the tail thirteen. The philander is of a reddish brown above, with a brownish border ; the mouth on each side is beset with very long whiskers ; down the forehead runs a brownish stripe ; the thumbs on the hind feet are rounded, as in most others of their genus. It has ten upper fore teeth, of which the middle ones are rather longer than the rest ; and eight lower fore teeth, the middle ones rather longest, and standing distant. It is a native of Surinam, and in all probability of several other parts of South America.

## LEMURINE OPOSSUM.

THIS is a large species, being equal in size to a cat, but longer bodied in proportion. Its colour is a fine brownish or iron-grey above, and pale yellowish brown beneath, in some specimens nearly white; the sides of the neck and the feet have also a tinge of this colour; the fur on the whole animal is extremely thick, rich, and soft, scarcely yielding in elegance to that of the petaurus, or great flying opossum; the muzzle is short and roundish; the whiskers large; the ears upright, large, and a little inclining to a pointed form at the tips; the eyes bright, and reddish; the hind feet furnished with a rounded interior toe; the tail, which is thick, long, and very furry, is prehensile, and is of the same colour with the body for about a fourth of its length, the remainder being black; it is naked beneath to a great distance from the tip. The general length of the body is about eighteen inches; of the tail about twelve. Living specimens of this beautiful animal have been brought into England. In their manner of life they resemble the rest of this genus, feeding on small birds, vegetables, &c. In feeding they often set in the manner of a squirrel, holding their food in their hands.

## PORCULINE OPOSSUM.

A SPECIMEN of this is preserved in Mr. Hunter's museum. It is about the size of a half grown domestic cat, and is remarkable for a thicker or more corpulent habit than most others of the genus. The hind legs are considerably longer than the fore, and have in miniature the form of those of the kangaroo and some other Australasian qua-

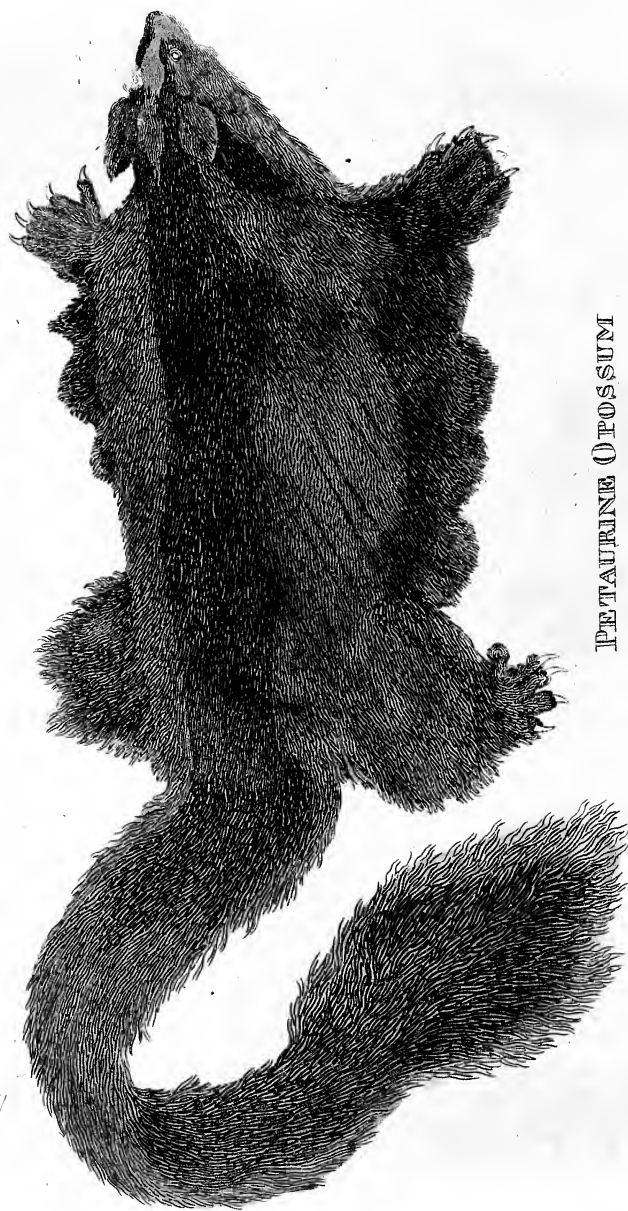
drupeds ; though the middle claws are far less in proportion, the interior ones are double, or both covered by a common skin. The colour of this species, is a pale yellow brown ; paler and inclining to whitish beneath ; and its hair is of a coarser, or more harsh appearance than the rest of the small opossums ; the ears are rounded ; the tail rather long. When viewed in a cursory manner, the animal bears a distant resemblance to a pig in miniature.

## VIVERINE OPOSSUM.

THIS animal is remarkable for its slender form ; and this, together with its sharpened visage and long bushy tail, gives it, at first view, the appearance of one of the weasel tribe, rather than that of the opossum. Its general size seems to be that of a stoat, measuring about ten inches from nose to tail, and its tail about eight inches. It appears, however, to vary in size, since different describers differ greatly in their accounts. In the work of Governor Phillip, (published by Mr. Stockdale, in the year 1789,) it is said to measure fifteen inches from the nose to the tail, the tail measuring about ten inches ; but in Mr. White's publication, the description by Mr. Hunter states the animal to be about the size of a rat. The different age of the specimens examined, may account for these discrepancies. The colour of the whole animal is a deep glossy black, the whole body and outsides of the limbs being spotted with pretty numerous, large, and somewhat irregular patches of white. If, however, we admit Mr. Hunter's idea on this subject, the black and white animal just described, is of the same species with a brown one of the same size, and differing only in colour. The brown variety, is that which Mr. Hunter, in the publica-







PETAURINE OPOSSUM

tion before referred to, has very accurately described.

## PETAURINE OPOSSUM.

THE size, colours, and form of the petaurine, or great flying opossum of New Holland, conspire to render it one of the most beautiful of quadrupeds. It measures about twenty-two inches from the tip of the nose to the beginning of the tail, which is twenty inches in length. The body is about the size of a half grown cat, or a small rabbit, and the general appearance of the animal is similar to that of a flying squirrel; an expansile membrane, covered with fur, stretching from the fore legs to the hind; on each side the body, and thus enabling the animal to spring to a considerable distance at pleasure.

The general colour of this species, is a very fine sable, or deep grey-brown above, varied with a cast of ferruginous; beneath, it is nearly white; a stripe of darker, or blacker brown than the rest, runs along the back, from head to tail; the fur near the edge of the flying membrane, on its upper part, has also a blacker, or darker tinge than on the other parts, while the edge itself is white; thus forming a beautiful contrast of colour round the whole border of the membrane; a dark, or blacker shade than that on the rest of the fur, prevails on the upper parts of the shoulders, extending over each side of the neck. The tail is nearly equal to the whole length of the head and body, and is extremely full of long, soft fur, of a blacker cast than the rest, particularly towards the end, where it is longer, or more flocky than towards the base; the whole is of a roundish, or subcylindric form, but from the disposition of the long fur, has a slightly flattened appearance towards the extremity.

The native name of this animal is hepoona too.

## SQUIRREL OPOSSUM.

THIS is perhaps the most beautiful quadruped, if we except the petaurus or great flying opossum, of all the Australasian species yet discovered. In its general aspect it has so much the appearance of a squirrel, that, on a cursory view, it might readily pass for such. A more exact inspection into its character, will, however, evince it to be a genuine opossum.

Its size is nearly that of a common squirrel ; but from the fullness and particular growth of the fur, which, like that of a lemur, grows in a sub-erect manner, it appears somewhat larger. Its general colour is exactly like that of the sciurus cinereous, or American grey squirrel. A black stripe passess over each eye along the top of the head ; under each ear is a black patch surrounded with white ; the hair on the white part having a more soft or flocculent appearance than the black. The tail, which is prehensile, is of the same colour with the body for half its length, the remainder being black. It is very full of hair, and tapers a little towards the extremity, but without any acute termination. The eyes are black, rounded, and full ; the ears round, shortish, and very thin ; the whole underside of the animal is milk-white ; the upper parts of the feet are also white ; and the edge of the lateral or flying membrane which extends from the fore feet to the hind, is edged with a blackish border, as in the flying squirrels. The abdominal pouch is of a considerable size, and is situated as in other opossums, on the lower part of the abdomen ; the hind feet are furnished with a rounded, unarmed, or mutic

thumb. Nothing can exceed the softness and delicacy of this animal's fur, which is, if possible, still finer than that of the petaurus; to which, indeed, though very greatly inferior in size, as well as widely different in colour; it yet bears a striking affinity. It is a nocturnal animal, and continues torpid the greatest part of the day; but during the night is full of activity. In this, as well as in other Australasian opossums, the two toes on the hind feet nearest the thumb, or rounded one, are connate, or both conjoined under one common skin.

#### LONG-TAILED OPOSSUM.

THIS species is about the size of a black rat, and is of a dark or brownish grey above, and whitish beneath; the head and neck are also whitish beneath, but a dusky stripe runs along the top of the head almost to the nose; the ears are whitish, moderately large, and slightly rounded; the upper parts of the fore feet are whitish; and the lower half of the tail is of a deeper black than the beginning. In the structure of the feet it agrees with other Australasian opossums; the two interior toes of the hind feet being united under one common skin.

#### PIGMY OPOSSUM.

THIS is by far the most minute of all opossums, and from its diminutive size, not exceeding that of a common mouse, has been named the pigmy opossum. It is furnished on each side the body with an expansile membrane, exactly in the manner of a flying squirrel, by the assistance of which it is enabled to spring to a considerable distance. The fur on the whole animal is extremely fine; the co-

lour is a soft or palish brown above, and almost white beneath ; the edges of the flying membrane are also white ; the nose, feet, and ears, internally are of a light pink or flesh colour ; the tail of a flattened form, and is beautifully edged on each side with soft silky hairs. The tongue in this animal is remarkably large and long, and of a flattened form ; the hind feet have rounded and unarmed thumbs, and the two interior toes are united under a common skin. Shaw is inclined to think that this little species feeds on insects, and probably on young birds, eggs, &c.

#### BRUSH-TAILED OPOSSUM.

THIS species is about the size of the black rat, and of an elegant appearance. The general colour is cinereous or deep grey, somewhat darker on the back ; the nose is rather sharp ; the ears moderately large, and of a very slightly pointed form at the tips ; the sides of the mouth are furnished with very long fine bristles or whiskers, and others somewhat shorter are situated above each eye ; the feet are formed as in others of this tribe ; the sides are dilated into a flying membrane ; and the tail is thin and ash coloured for nearly half its length, and from thence is jet black, with very long fine hairs, so disposed as to represent a brush or large camel's hair pencil.

#### VULPINE OPOSSUM.

THIS, which is one of the larger opossums, is said to measure twenty-six inches from the nose to the setting on of the tail, and the tail itself fifteen inches. The general colour of the animal is on the upper parts dusky grey, with a rufous tinge ; all the under parts being of a tawny buff colour,

deepest on the throat ; the tail is of the colour of the back for about a quarter of its length, and from thence to the end black ; it appears from the representation in Mr. Phillip's Voyage, to be well covered with fur to the very end. Upon the whole, Dr. Shaw supposes that it is in reality no other than the species already described, under the name of the lemurine opossum.

#### URSINE OPOSSUM.

THE largest of all the opossums ; size of a badger ; colour pale yellow ; fur longish and suberect ; nose strongly divided by a furrow.

Native of New Holland ; a species very lately discovered, and not yet fully, or satisfactorily known, or described.

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### KANGUROO TRIBE.

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THE kangaroos (of which only two species have yet been discovered, and both of these in New Holland,) are furnished, like the opossums, with an abdominal pouch. This, and a few other characters that they have in common with that tribe, caused them to be arranged by Linnæus, along with the opossums. They have, however, since been taken into a separate tribe with the following characteristics :—Six front teeth in the upper jaw, emarginated ; and two in the lower, very large, long, and sharp, pointing forwards ; five grinders on each side in both jaws, distant from the other teeth,

The fore legs short, and the hinder ones very long ; and in the female an abdominal pouch containing the teats.

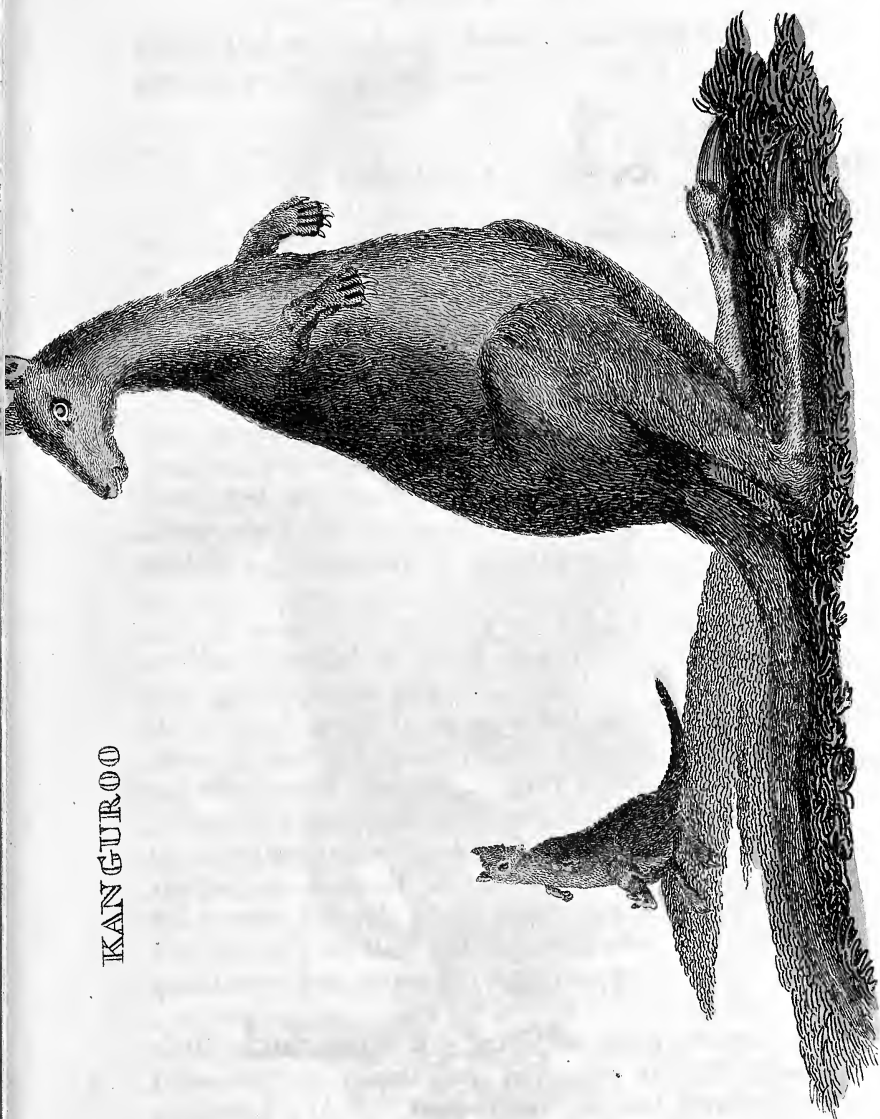
## GREAT KANGUROO.

THIS singular quadruped, which was first discovered in New Holland, in the year 1770, by Captain Cook, has frequently been seen nearly nine feet in length from the tip of the nose to the end of the tail ; some of the species have been found to weigh a hundred and fifty pounds, and this is generally believed to be by no means the largest size they will arrive at. The greatest circumference of the animal is round the bottom of the belly and hips ; being very small about the head and neck, and increasing gradually downwards. The fore legs of the largest are about nineteen inches in length ; the hinder ones three feet seven inches. The hind legs, which are perfectly bare and callous beneath, are very strong ; and when sitting, the animal rests on the whole of their length, its rump being elevated several inches from the ground. The claws are only three in number, the middle one exceeding the others greatly in length and strength ; but the inner one is of a peculiar structure ; at first sight appearing single, though on farther inspection it is seen to be really divided down the middle, and even through the ball of the toe belonging to it, appearing as if separated by a sharp instrument.

From the make of the animal, there can be little doubt that its principal progressive motion must be (notwithstanding the remark of M. Labillardiere) by leaps ; in these exertions it has been seen to exceed twenty feet at a time, and this so often repeated as almost to elude the swiftness of the



KANGUROO





fleetest greyhound ; besides which, it will frequently bound over obstacles of nine feet, or more in height, with the greatest ease.

The kangaroos have also vast strength in their tail, which they occasionally use as a weapon of defence ; for with it they strike with such astonishing force as even to break the leg of a man. The colonists for some time considered this as the animal's chief defence ; but having of late hunted them with greyhounds, it was soon discovered that they use both their claws and teeth. On the hound seizing them, they turn, and catching hold with the nails of their fore paws, strike the dog with the claws of their hind feet, which are wonderfully strong, and tear him to such a degree, that the hunters are frequently under the necessity of carrying him home on account of the severity of his wounds. The native dogs of the country hunt and kill the kangaroo ; but these are more fierce than our greyhounds. In the year 1788, one of them was seen, by one of the colonists, in this pursuit ; and the person, till he had shot the dog, mistook them both for kangaroos.

The kangaroo generally feeds standing on its four feet, in the manner of other quadrupeds. It drinks by lapping. When in a state of captivity, it has sometimes a trick of springing forwards, and kicking with its hind feet in a very forcible manner ; during which action it rests, or props itself on the base of its tail.

The female has two mammæ, or breasts, in the abdominal pouch, on each of which are two teats ; yet, so far as has been hitherto observed, she produces but one young one at a birth ; and so exceedingly diminutive is this at its first exclusion from the uterus, that it scarcely exceeds an inch in length, and weighs but twenty-one grains. At

this early period of its growth, the mouth is merely a round hole, just large enough to receive the point of the nipple ; but it gradually extends with age, till capable of receiving the whole nipple, which then lies in a groove, formed in the middle of the tongue, and well adapted to that purpose. It seems probable, that in the first state it is attached to the teat by a viscid gelatinous substance, which is always found in the uterus. At this time, feeble as it may appear in other respects, the fore paws are, comparatively, large and strong, and the claws extremely distinct, to facilitate the motion of the little animal during its residence in the large pouch ; while the hind legs, which are afterwards to become very long and stout, are now both shorter and smaller than the others. The young one continues to reside in the pouch till it has attained its full maturity, occasionally running out for exercise or amusement ; and even after it has quitted its maternal retreat, it often runs into it for shelter on the least appearance of danger.

The kangaroos live entirely on vegetable substances, and chiefly on grass. In their native state they are said to feed in herds of thirty or forty together ; and one is generally observed to be stationed, apparently on watch, at a distance from the rest. According to Labillardiere, they seem to be nocturnal animals. They have the eye furnished with nictitating, or winking membranes, situated at the interior angle, and capable of being extended at pleasure entirely over the ball. They live in burrows, which they form in the ground.

One of the most remarkable peculiarities of this animal, is the extraordinary faculty which it has of separating, to a considerable distance, the two long fore-teeth in the lower jaw. This, however, is



RADIATED SHREW



RAT KANGUROO



not absolutely peculiar to the kangaroo ; but takes place also in an animal of a very different and distinct genus, the *mus maritimus*.

The flesh of the kangaroo is said to be somewhat coarse, and such as to be eaten rather from want of other food, than as an article of luxury. Mr. Hunter, however, calls it good mutton ; but owns it is not quite so delicate as what he has sometimes seen bought in Leadenhall market.

The kangaroo may now be considered as in a great degree naturalized in England ; several having been kept for some years in the royal domains at Richmond, which, during their residence there, have produced young, and apparently promise to render this most elegant animal a permanent acquisition to our country ; though it must, no doubt, lose, by confinement and alteration of food, several of its natural habits, and exhibit somewhat less of that bounding vivacity, which so much distinguishes it in its native wilds of New Holland.

#### RAT KANGUROO.

THIS species, which, from its colour and the general aspect of its upper parts, has obtained the title of the kangaroo rat, is about the size of a rabbit ; the head is rather flattened sideways, and bears some resemblance to that of a rat ; the general shape of the animal resembles that of the kangaroo, but is far less elegant, the proportions of the parts less pleasing, and the hair, which is a dusky cinereous brown, of a coarser nature. In its teeth it agrees with the great kangaroo, except that it has eight instead of six front teeth in the upper jaw, the two middle ones being sharp-pointed ; the fore teeth in the lower jaw are like those of the kangaroo as to shape and position, but

are smaller in proportion ; the grinders are three in number on each side both above and below, the foremost being fluted or channelled with several longitudinal ribs ; the two remaining ones plain ; the ears are rather large, and on each side of the upper lip are several long whiskers. The structure of the hind feet in this species perfectly resembles that of the kangaroo, but the fore feet have only four toes. The female is furnished with an abdominal pouch for the reception of the young. Some of this species were imported in a living state from New Holland, and brought forth young. Its native name is ooto roo.

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## MOLE TRIBE.

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THE characters of this genus are a long nose ; the upper jaw much longer than the lower ; no ears ; fore feet very broad, with scarcely any apparent legs before, and small hind feet.

There are only seven species belonging to this genus.

### COMMON MOLE.

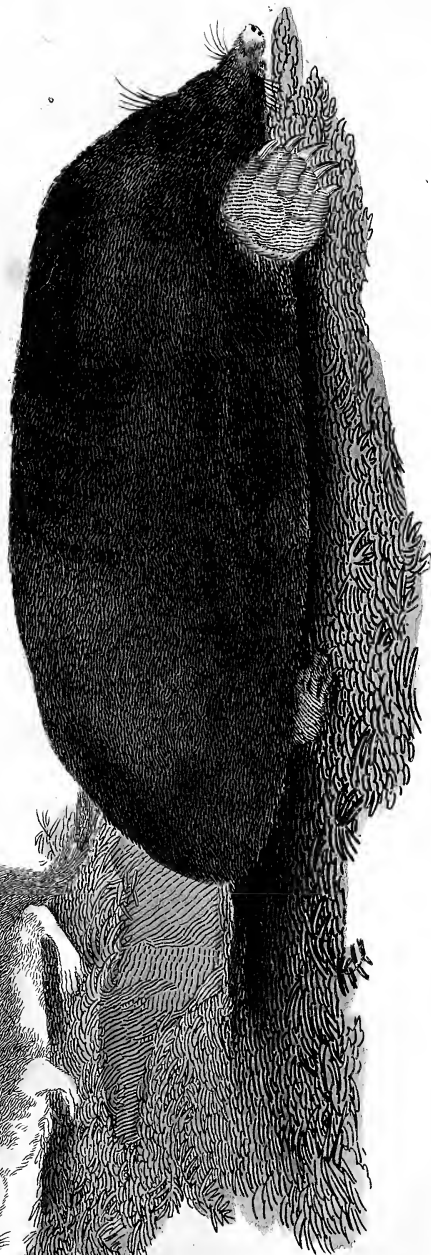
THIS animal, so well known in England, is, however, utterly a stranger in some other places, and particularly in Ireland. For such, therefore, as have never seen it, a short description will be necessary. And, in the first place, though somewhat of a size between the rat and the mouse, it no way resembles either, being an animal entirely of a singular kind, and perfectly unlike any other

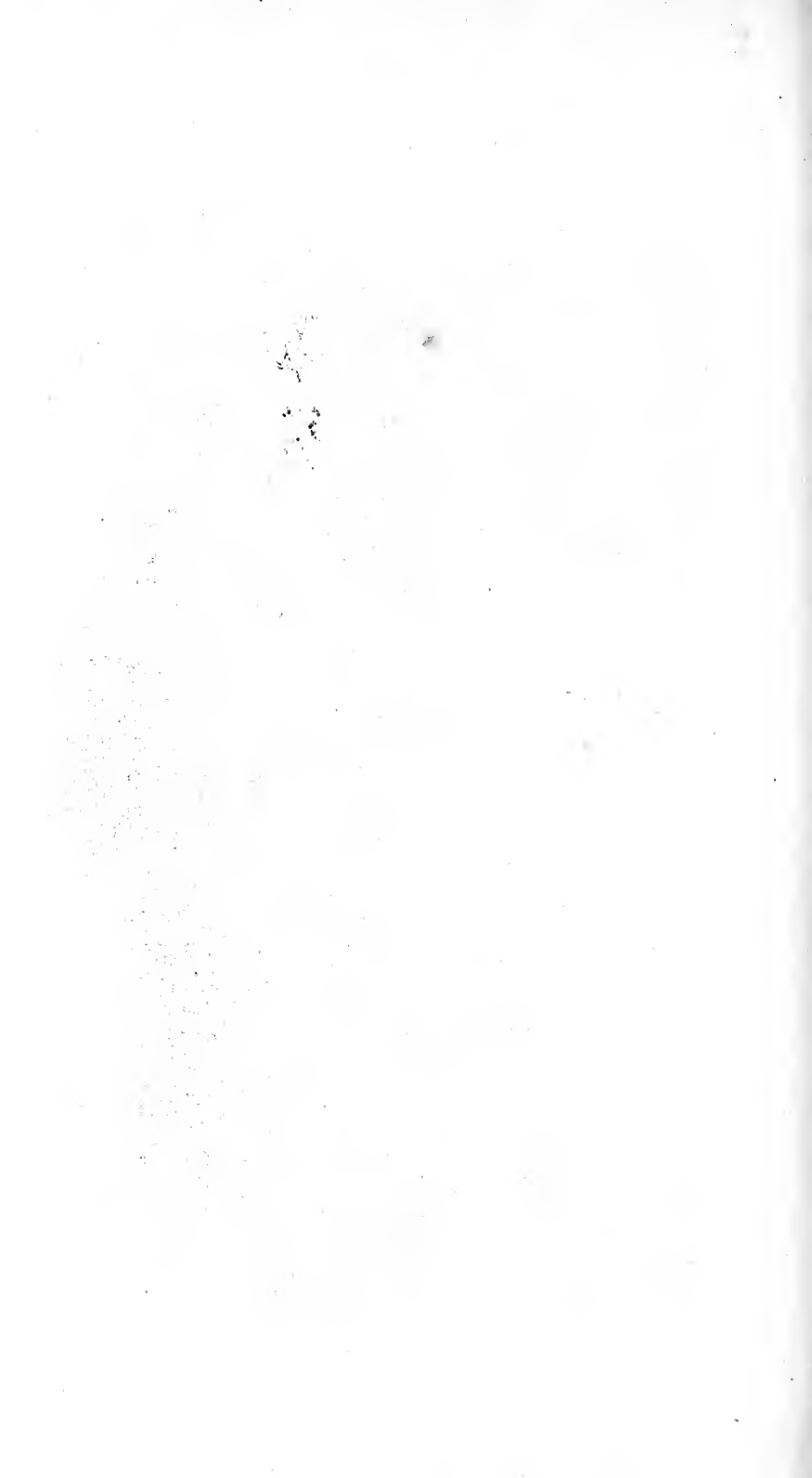


SHREW



MOLE





quadruped whatever. It is bigger than a mouse, with a coat of fine, short, glossy, black hair. Its nose is long and pointed, resembling that of a hog, but much longer. Its eyes are so small, that it is scarce possible to discern them. Instead of ears, it has only holes in the place. Its neck is so short, that the head seems stuck upon the shoulders. The body is thick and round, terminating by a very small short tail, and its legs also are so very short, that the animal seems to lie flat on its belly. From under its belly, as it rests in this position, the four feet appear just as if they immediately grew out of the body. Thus the animal appears to us at first view as a mass of flesh covered with a fine, shining, black skin, with a little head, and scarce any legs, eyes, or tail. On a close inspection, however, two little black points may be discerned, that are its eyes. The ancients, and some of the moderns, were of opinion that the animal was utterly blind; but Derham, by the help of a microscope, plainly discovered all the parts of the eye that are known in other animals, such as the pupil, the vitreous and crystalline humours. The fore legs appear very short and strong, and furnished with five claws to each. These are turned outwards and backwards, as the hands of a man when swimming. The hind legs are longer and weaker than the fore, being only used to assist its motions; whereas the others are continually employed in digging. The teeth are like those of the shrew mouse, and there are five on both sides of the upper jaw, which stand out; but those behind are divided into points. The tongue is as large as the mouth will hold.

Such is the extraordinary figure and formation of this animal; which, if we compare with its manner of living, we shall find a manifest atten-

tion in nature to adapt the one to the other. As it is allotted a subterraneous abode, the seeming defects of its formation vanish, or rather are turned to its advantage. The breadth, strength, and shortness of the fore feet, which are inclined outwards, answer the purposes of digging, serving to throw back the earth with greater ease, and to pursue the worms and insects which are its prey; had they been longer, the falling in of the earth would have prevented the quick repetition of its strokes in working; or have obliged it to make a large hole in order to give room for their exertion. The form of the body is not less admirably contrived for its way of life. The fore part is thick, and very muscular, giving great strength to the action of the fore feet, enabling it to dig its way with amazing force and rapidity, either to pursue its prey, or elude the search of the most active enemy. By its power of boring the earth, it quickly gets below the surface; and it has been seen, when let loose in the midst of a field, instantly to sink into the earth; and the most active labourer, with a spade, in vain attempted to pursue it.

The smallness of its eyes, which induced the ancients to think it was blind, is, to this animal, a peculiar advantage. A small degree of vision is sufficient for a creature that is ever destined to live in darkness. A more extensive sight would only have served to shew the horrors of its prison, while nature had denied it the means of an escape. Had this organ been larger, it would have been perpetually liable to injuries, by the falling of the earth into it; but nature, to prevent that inconvenience, has not only made them very small, but very closely covered them with hair. Anatomists mention, beside these advantages, another that

contributes to their security ; namely, a certain muscle, by which the animal can draw back the eye, whenever it is necessary, or in danger.

As the eye is thus perfectly fitted to the animal's situation, so also are the senses of hearing and smelling. The first gives it notice of the most distant appearance of danger ; the other directs it, in the midst of darkness, to its food. The wants of a subterraneous animal can be but few ; and these are sufficient to supply them ; to eat, and to produce its kind, are the whole employment of such a life ; and for both these purposes, it is wonderfully adapted by nature.

Thus admirably is this animal fitted for a life of darkness and solitude ; with no appetites but what it can easily indulge, with no enemies but what it can easily evade or conquer. As soon as it has once buried itself in the earth, it seldom stirs out, unless forced by violent rains in summer, or when in pursuit of its prey, it happens to come too near the surface, and thus gets into the open air, which may be considered as its unnatural element. In general, it chooses the looser, softer grounds, beneath which it can travel with greater ease ; in such, also, it generally finds the greatest number of worms and insects upon which it chiefly preys. It is observed to be most active, and to cast up most earth, immediately before rain ; and, in winter, before a thaw ; at those times the worms and insects begin to be in motion, and approach the surface, whither this industrious animal pursues them. On the contrary, in very dry weather, the mole seldom or never forms any hillocks ; for then it is obliged to penetrate deeper after its prey, which, at such seasons, retire far into the ground.

As the moles very seldom come above ground, they have but few enemies ; and very readily evade the pursuit of animals stronger and swifter than

themselves. Their greatest calamity is an inundation ; from which, wherever it happens, they are seen in numbers attempting to save themselves by swimming, and using every effort to reach the higher grounds. The greatest part, however, perish, as well as their young, which remain in the holes behind. Were it not for such accidents, from their great fecundity, they would become extremely troublesome ; and, as it is, in some places, they are considered by the farmer as his greatest pest. They couple towards the approach of spring ; and their young are found about the beginning of May. They generally have four or five at a time ; and it is easy to distinguish among other mole-hills, that in which the female has brought forth her young. These are made with much greater art than the rest ; and are usually larger. The female, in order to form this retreat, begins by erecting the earth into a tolerable spacious apartment, which is supported within by partitions, at proper distances, that prevent the roof from falling. All round this she works, and beats the earth very firm, so as to make it capable of keeping out the rain, let it be never so violent. As the hillock, in which this is thus formed, is raised above ground, the apartment itself is consequently above the level of the plain, and, therefore, less subject to accidental slight inundations. The place being thus fitted, she then procures grass and dry leaves as a bed for her young. There they lie secure from wet, and she continues to make their retreat equally so from danger ; for all round this hill of her own raising, are holes running into the earth, that part from the middle apartment, like rays from a centre, and extend about fifteen feet in every direction ; these resemble so many walks, or chases, into which the animal makes her subterraneous excursions, and

supplies her young with such roots or insects as she can provide ; but they contribute still more to the general safety ; for as the mole is very quick of hearing, the instant she perceives her little habitation attacked, she takes to her burrow, and unless the earth be dug away by several men at once, she and her young always make a good retreat.

Moles, like the beavers, and some other quadrupeds, live in pairs ; and so lively and reciprocal an attachment subsists between them, that they seem to disrelish all other society. In their dark abodes they enjoy the placid habits of repose and of solitude ; they also have the art of securing themselves from injury, of almost instantaneously making an asylum or habitation, and of obtaining a plentiful subsistence, without the necessity of going abroad. They shut up the entrance to their retreats, and seldom leave them, unless compelled by the admission of water, or when their mansions are demolished.

During the summer, these animals run in search of food, in the night, among the grass ; and thus frequently become the prey of owls. They exhibit a considerable degree of art in skinning the worms, which they always do before they eat them ; stripping the skin from end to end, and squeezing out all the contents of the body.

The verdant circles in the meadows and pastures, called by the country people fairy-rings, are supposed to be owing to the operations of the moles ; who, at certain seasons, perform their burrowing by circumgyrations ; and this, loosening the soil, gives to the surface directly over these tracks greater fertility and rankness of grass than is seen in other parts.

When moles are first taken, either by digging or otherwise, they utter a shrill scream, and prepare for their defence by exerting the strength of their

claws and teeth. They are said to be very ferocious animals ; and however contented they may be together underground, yet, when above, they will sometimes tear and eat one another. In a glass case, in which a mole, a toad, and a viper were inclosed, the mole has been known to dispatch the other two, and to devour a great part of each.

The skin of the mole is exceedingly tough ; the fur is close-set, and softer than the finest velvet, or, perhaps than the fur of any other animal. This is usually black ; but moles have been found spotted with white ; and sometimes, though only rarely, altogether white.

Linnæus says that the mole passes the winter in a state of torpidity. In this assertion, however, he is directly contradicted by the Comte de Buffon ; according to whom it sleeps so little in the winter, that it raises the earth in the same manner as during the summer.

The following is a very remarkable instance, related by Arthur Bruce, Esq. in the Transactions of the Linnæan Society, of the exertions which the mole makes towards crossing even broad waters. " On visiting," says this gentleman, " the loch of Clunie, which I often did, I observed in it a small island at the distance of one hundred and eighty yards from the nearest land, measured to be so upon the ice. Upon the island, lord Airly, the proprietor, has a castle and a small shrubbery. I remarked frequently the appearance of fresh mole-casts or hills. I for some time took them for those of the water-mouse ; and one day asked the gardener if it was so. No, he said, it was the mole ; and that he had caught one or two lately. Five or six years ago he caught two in traps ; and for two years after this, he had observed none. But about four years ago, coming ashore one summer's even-



ing in the dusk, he and another person, (lord Airly's butler) saw, at a short distance, upon the smooth water, some animal paddling to, and not far from the island. They soon closed with this feeble passenger ; and found it to be our common mole, led by a most astonishing instinct, from the nearest point of land (the Castle hill) to take possession of this desert island. It had been, at the time of my visit, for the space of two years quite free from any subterraneous inhabitant ; but the mole has, for more than a year past, made its appearance again, and its operations I have since been witness to." The depth of water in this lake is seldom less, either in summer or winter, than six feet in the shallowest, and from thirty to forty in the deepest parts.

People in general are not aware of the great mischief occasioned in fields and gardens by these animals. We are, however, informed by M. de Buffon, that in the year 1740 he planted about sixteen acres of land with acorns, the greater part of which was in a very short time carried away by the moles to their subterraneous retreats. In many of these were found half a bushel, and in some even a bushel. Buffon, after this circumstance, caused a great number of iron traps to be constructed ; by which, in less than three weeks, he caught one thousand three hundred moles. To this instance of devastation we may add the following : In the year 1742 they were so numerous in some parts of Holland, that one farmer alone caught between five and six thousand of them. The destruction occasioned by these animals is, however, no new phenomenon. We are informed that the inhabitants of the island of Tenedos, the Trojans, and the Æolians, were infested by them in the earliest ages ; and for this reason a temple was

erected to Apollo Smintheus, the destroyer of moles.

“The moles,” says Dr. Darwin, “have cities underground, which consist of houses, or nests, where they breed and nurse their young. Communicating with these are wider and more frequented streets, made by the perpetual journeys of the male and female parents; as well as many other less frequented alleys or by-roads, with many diverging branches, which they daily extend to collect food for themselves or their progeny.

“This animal is most active in the vernal months, during the time of its courtship; and many more burrows are at this time made in the earth for their meeting with each other. And though they are commonly esteemed to be blind, yet they appear to have some perception of light, even in their subterraneous habitations; because they begin their work as soon as it is light, and consequently before the warmth of the sun can be supposed to affect them. Hence one method of destroying them consists in attending to them early, before sunrise; at that time the earth or the grass may frequently be seen to move over them; and with a small light spade their retreat may be cut off by striking it into the ground behind them, and they may be immediately dug up.”

If a fresh mole-hill, says another writer, is found by itself, that appears to have no communication with any other, (which is always the case when the mole has worked from the surface downwards, as it frequently does in endeavouring to procure a more convenient habitation;) after the hill has been turned up by a spade, a bucket of water should be poured over the mouth of the passage. By these means the animal, which is at

no great distance, will be obliged to come forth, and may be easily caught with the hand. It is very easy to discover whether a hill has any communication with another, by applying the ear to it, and then coughing or making a loud noise ; if it has no communication, the terrified animal may be heard by its motion. It will then be almost impossible for it to escape ; and the water may either be poured into the hole, or the earth may be turned up with a spade till the mole is found ; for it does not often go deeper into the earth than from fifteen to eighteen inches.

In the moist beds of a garden, which it is very fond of, the mole makes a passage at the depth of scarcely an inch below the surface. In this case it is easily caught. When seen at work here, it is only necessary to tread behind the animal with the foot, on the passage, to prevent its retreat, and then turn it up with a spade.

"The mole," continues Dr. Darwin, whose account we resume, "suckles four or five, and sometimes six young ones ; which are placed considerably deeper in the ground than the common runs ; and the mole-hills near them are consequently larger, and generally of a different colour. These nests are to be dug up ; having first intercepted the road between them and the mole-hills in the vicinity, to cut off the retreat of the inhabitants.

"The next important circumstance is to discover which are the frequented streets, and which the bye-roads ; for the purpose of setting subterraneous traps. This is effected by making a mark on every new mole-hill, by a light pressure of the foot ; and the next morning observing whether a mole has again passed that way, and obliterated the foot mark. This is to be done for two or three successive mornings. These foot marks should not be deeply impressed ; lest the

animal be alarmed on his return, and thus induced to form a new branch of road rather than open the obstructed one.

“ The traps are then to be set in the frequented streets, so as to fit nicely the divided canal. They consist of a hollow semi-cylinder of wood ; with grooved rings at each end, in which are placed nooses of horsehair, fastened loosely by a peg in the centre, and stretched above ground by a bent stick. When the mole has passed half way through one of the nooses and removes the central peg in his progression, the bent stick rises by its elasticity, and strangles him.”

#### PURPLE MOLE.

THIS species so completely resembles the common European mole in almost every particular, that it might pass for a variety of that animal. Its colour is black, with a strong cast of changeable purple ; and the tail is white. It seems to have been first described by Seba, and is, according to that author, a native of Virginia.

#### CAPE MOLE.

THE Cape mole, called by Mr. Pennant the Siberian, though he says it inhabits the Cape of Good Hope and not Siberia, has a short blunt nose ; from each corner of its mouth a broad whitish bar, pointing upwards along the sides of its head ; the upper part of its body is varied with hair of a glossy green, and copper colour ; the under parts are brown. On each of the fore feet there are three toes with vast claws. On each of the hind feet there are five small toes with weak claws. It has no tail, but a round rump.

## RADIATED MOLE.

THE radiated mole has small, but broad fore legs, with five long white claws on each ; a long nose, having its sides beset with radiated tendrils ; very short, dusky, fine, compact hair ; scaly hind legs, with five toes on each foot. It measures three inches and three quarters ; its tail one and three tenths. It inhabits North America ; forms subterraneous passages in uncultivated fields, raises walks for itself about two inches high, and a palm broad ; it feeds on roots ; and has great strength in its legs.

## LONG-TAILED MOLE.

THE long-tailed mole has a radiated nose too, and inhabits North America also ; the claws on the fore feet are like those of the common mole ; those on the hind feet are very long and slender ; its hair is soft, long, and of a rusty brown ; four inches and a half long ; its tail two.

## BROWN MOLE.

THE brown mole has a slender nose ; no canine teeth ; hair brown at the ends, deep grey at the bottom, very soft and glossy ; its tail and feet white ; its length five inches and a half ; its tail is very slender, and not one inch long. It also inhabits North America.

## RED MOLE.

THE history of the red mole rests on the authority of Seba, who is not so particular as to inform

us whether it inhabits North or South America. He says it has three toes on the fore feet, and four on the hind ; and that the form of its body and tail is like the European kind.

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### SHREW TRIBE.

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Of this genus there are sixteen species. Their generic characters are, two cutting teeth in each jaw, pointing forward ; a long slender nose ; small ears ; and five toes on each foot.

#### MUSKY SHREW.

THIS species is seven inches long, and of a dusky colour, has no external ears, very small eyes, and a tail of eight inches, compressed sideways ; its belly is of a whitish ash colour ; it inhabits the river Wolga, and the lakes adjacent ; it is very slow, and never wanders far from lakes and rivers. It makes its hole in the banks, far below the lowest fall of the water, and works upwards, not so high as to reach the surface, but only to be out of the reach of the highest rise of the water ; it feeds on leeches, water insects, &c. ; but is itself devoured in its turn by the pikes and siluri ; and gives those fish so strong a flavour of musk, as to render them not eatable. Out of its tail is expressed a sort of musk, very much resembling the genuine kind. Their skins are put into chests among clothes to drive away moths, and to preserve the wearers from pestilence and fevers. They are so common near

Nizney Noyogorod, that the peasants frequently bring five hundred a-piece to market, and sell them for one ruble per hundred.

#### PERFUMING SHREW.

THE perfuming shrew is near eight inches long. Its upper jaw extends far beyond the lower; its upper fore teeth are short, the lower long and slender; it has long white whiskers; small eyes; ears transparent, broad and round; and a fine coat of short close hair, of a pale cerulean on the upper parts, lighter beneath; with white feet. It inhabits Java, and others of the East Indian islands. It eats rice. It has so strong a scent of musk as to perfume every thing it runs over. It is said, that by merely passing over it, it will render the wine in a well-corked bottle not drinkable. Cats will not touch them.

#### BRASILIAN SHREW.

THE Brazilian shrew, five inches long, is of a dusky colour, and is marked along the back with three broad black strokes. Its tail measures two inches. It does not fear the cat; neither does that animal hunt after it.

#### MURINE SHREW.

THE murine shrew, so called as being of the size of a common mouse, is of a brown colour, and inhabits Java; it has a long nose, hollow beneath, with very long hair about its nostrils; ears rounded, and rather naked; the tail a little shorter than the body, and not so hairy.

## FETID SHREW.

THE fetid shrew has its eyes small, and almost hid in its fur ; its head, and the upper part of its body are of a brownish red ; its belly of a dirty white ; it is only two inches and a half long ; its tail one and a half ; it inhabits most parts of Europe, Siberia, and even the Arctic flats, and Kamtschatka ; it is also found about the Caspian sea ; lives in old walls, heaps of stones, or holes in the earth ; feeds on corn, insects, or any filth, and has a disagreeable smell ; cats will kill, but not eat it : it brings four or five young at a time. There seems to be an annual mortality of these animals in August, numbers of them being then found dead in the paths.

## WATER SHREW.

THE water shrew has, like the rest, a long slender nose ; very minute ears, and within each, a tuft of white hairs, very small eyes hid in the fur. The colour of the upper part of its body is black ; its throat, breast, and belly, are of a light ash-colour ; the feet are white ; it has a triangular dusky spot beneath the tail ; it is three inches and three quarters long ; its tail two.

It inhabits various parts of Europe and Siberia, as far as the river Jenesay ; burrows in the banks of rivers ; is said to swim under water ; and chirrup like a grasshopper.

## MINUTE SHREW.

THE head of the minute shrew is near as big as the body ; its whiskers reach to its eyes, which are very small, and capable of being drawn in ; its



hair is very fine and shining, grey above and white beneath ; it is found about the Oby, and near the Kama ; it lives on seeds ; digs ; runs swiftly ; and has the voice of a bat.

#### PYGMY SHREW.

THE pygmy shrew is, in shape and colour, like the fetid, but paler ; its tail is small at both ends, and thick in the middle ; it is very common about the Jenisay and the Oby ; it weighs about half a drachm only, and is thought to be the least of all quadrupeds.

#### WHITE-TOOTHED, AND SQUARE-TAILED SHREWS,

HAVE little to distinguish them, except their generic characters, and those peculiarities from which they take their name.

These two species inhabit the neighbourhood of Strasburg.

#### CANADA SHREW.

THIS animal may, with great propriety, be termed *sorex radiatus* ; since the snout, which is long and slender, has a dilated cartilaginous extremity, furnished with a circular series of sharp-pointed processes, or soft tendrils, disposed in the manner of the rays in a spur. The whole animal is of a long form, and its habit immediately pronounces it to belong to the shrew tribe, and not to that of the mole. It seems to have been first described and figured by Mons. de la Faille, in his Memoir on moles. It is a native of Canada, and resembles the Mole only in some particular parts ; while in others it approaches to the mouse tribe ; having the same shape and agility. Its tail, which is three inches

long, is knotty, and almost naked, as well as the feet, which have five toes on each, and are covered with small brown and whitish scales on the upper part. This animal, according to M. de la Faille (who considers it, in a general view, as a species of mole), is more above ground, or less addicted to burrowing than the common mole. Its body is longish, and covered with black coarsish hair; the feet far less than those of a mole; the eyes hid under the skin; the snout edged on each side with upright vibrissæ; the radiated tentacula at the end of the nose are of a bright rose colour, and moveable at the pleasure of the animal, so as either to be brought together in a tubular form, or expanded in the form of a star.

#### SURINAM SHREW.

THIS is said to be about the size of the water shrew, which it most resembles; but is of a bay colour above, and of a pale yellowish ash beneath; the tail, which is about half the length of the body, is ash-coloured above, and white below; the muzzle is white, the ears short and round, like those of the common shrew. It is a native of Surinam.

#### ELEPHANT SHREW.

THIS species is of a deep brown colour, and of a thickish form, with a slender tail, about the length of the body, and a cylindric, long, and slender snout, or upper jaw, stretching very far beyond the lower. It is very indifferently represented in Petiver's *Gazophylacium*, and is said to be a native of the Cape of Good Hope.

## WHITISH-TAILED SHREW.

THIS appears from Schreber's figure, to be of the size and colour of the common shrew, and is whitish beneath; the tail is short, brown at the base, and whitish or much lighter as it proceeds to the tip.

## CINEREOUS SHREW.

THIS is of an uniform dusky cinereous colour, with the base of the tail narrow or compressed. It inhabits, like the three preceding species, the neighbourhood of Strasburg, where it was discovered by Professor Hermann.

## PERSIAN SHREW.

THIS is said to be rather larger than the Surinam shrew, measuring about three inches and a half. It is of a dusky grey above, and pale ash coloured beneath; in the form of its teeth it is nearly allied to the common shrew, and is a native of the northern parts of Persia.

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HEDGEHOG TRIBE.

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THE hedgehogs have two front teeth, both above and below; of which those in the upper jaw are distant, and those of the lower are placed near together. On each side there are canine teeth; in

the upper jaw five, and in the lower three. There are also four grinders on each side, both above and below ; and the body is covered on the upper parts with spines. The tail and feet are very short ; and the snout is somewhat cartilaginous.

There are seven species, none of which are carnivorous. Of these only one is found in Europe, and this is common in several parts of England.

#### COMMON HEDGEHOG.

THESE animals are natives of most of the temperate parts of Europe and Asia. They are generally about ten inches long, and of a greyish brown colour. Their usual residence is in small thickets ; and they feed on fallen fruits, roots, and insects ; they are also very fond of flesh-meat, either raw or roasted. They chiefly wander about by night, and during the day lie concealed in their holes.

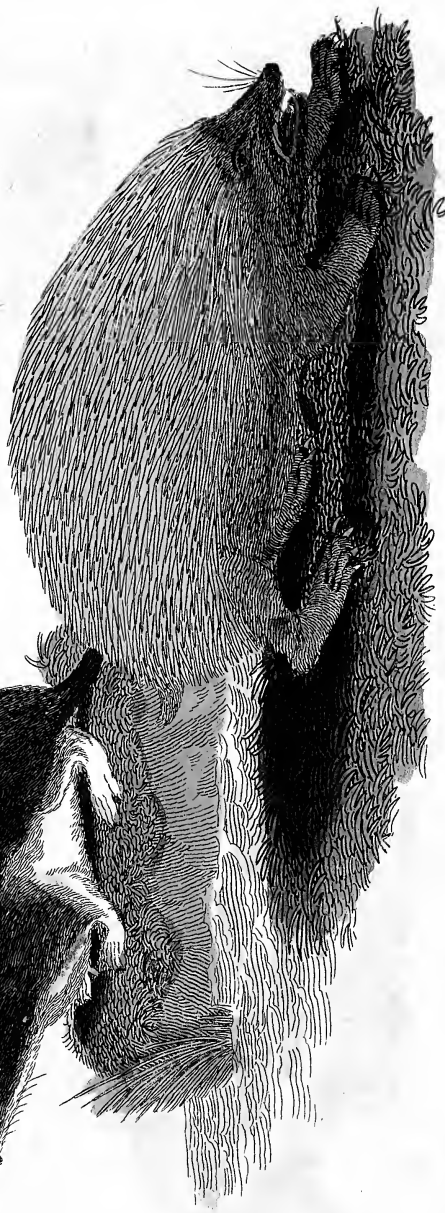
Naturalists have alleged that they enter gardens ; where they mount trees, and descend with pears, apples, or plums, stuck upon their bristles. This, however, is a mistake ; for if kept in a garden, they never attempt to climb trees, nor even to stick fallen fruit upon their bristles, but lay hold of their food with the mouth. They also are undeservedly reproached with sucking cattle and injuring their udders ; for the smallness of their mouths renders this altogether impossible.

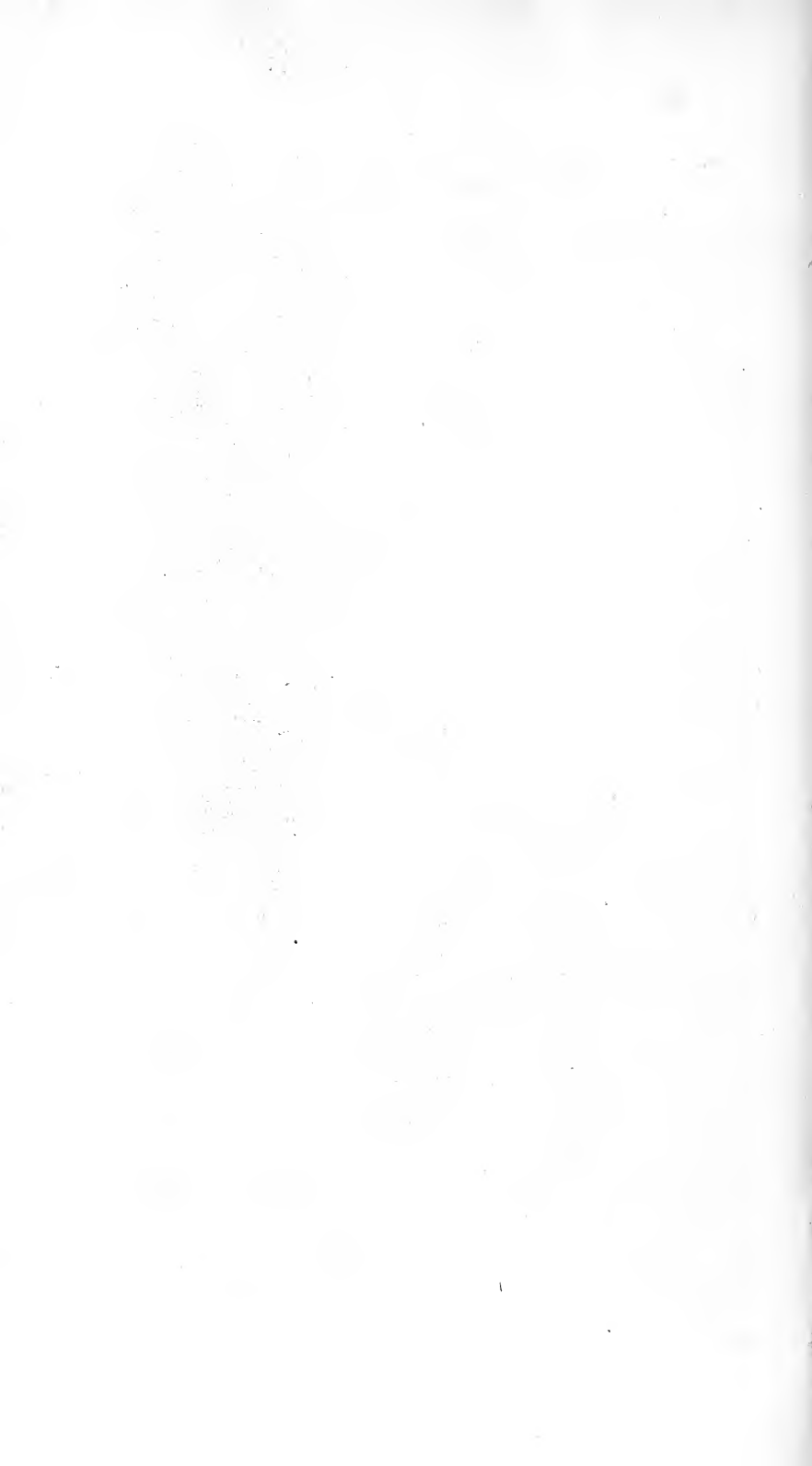
Mr. White says, that the manner in which the hedgehogs eat the roots of the plaintain in his grass walks is very curious. With their upper jaw, which is much longer than the lower, they bore under the plant, and gnaw the root off upwards, leaving the tuft of leaves untouched. In this respect they are serviceable, as they destroy a

WATER SHREW



THE DUG-HOG





very troublesome weed ; but they in some measure deface the walks, by digging in them small round holes.

The hedgehog has a very uncommon method of defending itself from the attacks of other animals. Being possessed of very little strength or agility, he neither attempts to fly from, nor to assail his enemies ; but erects his bristles, and rolls himself up like a ball, exposing no part of his body that is not covered with these sharp weapons. He will not unfold himself unless thrown into water ; and the more he is frightened or harassed, the closer he shuts himself up. While in this state, most dogs, instead of biting him, stand off and bark, not daring to seize him ; and if they attempt it once, their mouths are so pricked with his bristles, that it is with difficulty they can be prevailed upon to do it a second time. He is easily taken ; for he neither attempts to fly, nor to defend himself by any other means than this.

The hedgehog may be rendered in a considerable degree domestic ; and it has been frequently introduced into houses for the purpose of expelling those troublesome insects the blattæ, or cock-roaches, which it pursues with avidity, and on which it is fond of feeding. By the Calmuc Tartars these animals are kept in their huts instead of cats. There was a hedgehog in the year 1799, in the possession of a Mr. Sample, of the Angel inn, at Felton, in Northumberland, which performed the duty of a turn-spit, as well in every respect as a dog of that denomination. It ran about the house as familiarly as any other domestic quadruped, and displayed an obedience till then unknown in this species of animals. It used to answer to the name of Tom.

In the winter the hedgehog wraps itself up in a warm nest of moss, dried grass, and leaves,

and sleeps out the rigours of that season. It is frequently found so completely encircled with herbage, that it resembles a ball of dried leaves ; but when taken out, and placed before a fire, it soon recovers from its state of torpidity. It produces four or five young ones at a birth ; which are soon covered with prickles, like those of the parent animal, but shorter and weaker. The nest formed for these is large, and is composed principally of moss.

The hedgehog is occasionally an article of food, and is even said to be very delicate eating. The skin was used by the ancients for the purpose of a clothes-brush.

This animal differs very materially from the porcupine, (which at first sight it seems much to resemble,) both in the structure of its teeth, and in the shortness of its spines, or quills.

#### SIBERIAN HEDGEHOG.

THIS species, which is common from the Don to the Oby, is generally much inferior in size to the common kind ; but beyond the lake Baikal some are found much larger.

They grow very fat ; sleep all the winter in a hole a few inches deep ; live on insects, even the most caustic ; and will eat above a hundred cantharides without any injury. They roll themselves up, and have all the manners of the common kind. In the following particulars they differ from the former species ; their ears are large, open, and oval, with soft whitish hairs within ; the tail is shorter ; the spines are slender and brown, white at their roots and points ; and the limbs and belly are covered with a most elegant soft white fur.



## ASIATIC HEDGEHOG.

THIS species, the *tendrac* of Buffon, is about the size of a mole; has the upper part of the body covered with short white splines, marked with brown in the middle; the lower parts with whitish, fine, but hard hair. The tail, which is very short, is also covered with spines. They walk slowly, and grunt like hogs.

There is a larger variety of this species, which Buffon calls *tanree*; each of these varieties have five toes on each foot; they inhabit India and Madagascar. Some are said to grow to the size of rabbits. They are also said to grunt like hogs; to grow very fat; to multiply greatly; to frequent shallow pieces of water; to burrow on land; and to lie torpid during six months; during which time their old hair falls off, and they rise in a new suit. Their flesh is eaten by the Indians, but is very flabby and insipid.

## GUIANA HEDGEHOG.

THE Guiana, or American hedgehog, has no external ears; a short thick head; spines ash-colour, tinged with yellow; its lower parts are covered with soft whitish hair; it has a short tail; long and crooked claws; and is about eight inches long.

## MALACCA HEDGEHOG.

THIS species, which seems to have been first described by Seba, has so completely the appearance of a porcupine, that nothing but a

severe adherence to systematic arrangement from the teeth, could justify its being placed in the present genus; yet even this particular seems not yet distinctly known, the animal being rarely imported into Europe. The particular size is not mentioned by Seba, but it appears to be a large species, since the length of its quills is said to be from an inch to a foot and half, on different parts of the animal. It is therefore probably about the size of the common porcupine, and they are variegated in a similar manner; the ears are large and pendulous; and there is no crest or ruff of longer bristles than the rest on the back of the head, as in the common porcupine.

This is said to be the animal from which is taken the particular Bezoar, called Piedra del Porco, the Lapis Hystricis, Bezoar Hystricis, and Lapis Porcinus, of the old *Materia Medica*, so long and so highly extolled on account of its supposed virtues; which were such, according to some authors, as to produce the most wonderful and salutary effects in fevers, and various other disorders of a malignant nature.

In order to experience the effect of this wonderful concrete, which is commonly about the size of a small walnut, round, smooth, and of a reddish brown colour, nothing more was necessary than to infuse it for some minutes in a glass of wine, water, or other liquor, which was, by this method, impregnated with all its virtues, and administered to the patient. The truth is, that being a biliary concretion, found in the gall-bladder, it is intensely bitter, and being salutary in water, impregnates the fluid with its bitterness, and with its supposed aperient, stomachic, and alexipharmic virtues.

Those concretions, which have now lost their consequence, and are regarded merely as curious specimens of the old *Materia Medica*, were once so esteemed, as to have been sold, when large and perfect, for the sum of five hundred CROWDS.

END OF THE FIRST VOLUME.

